August, 1952

# SOAP and Sanitary Chemicals

On this issue ...

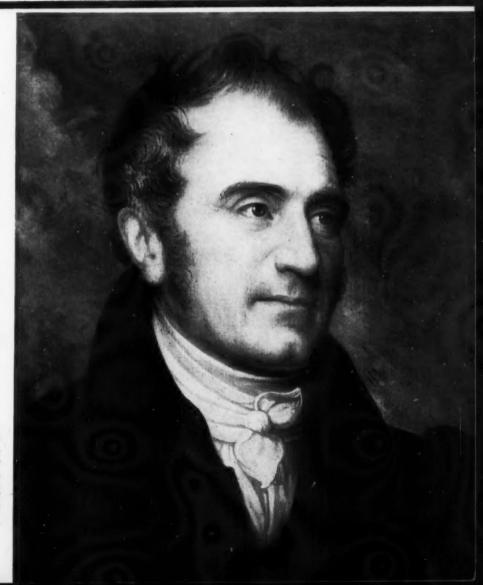
Soap use today—per capita consumption world figures

Sanitary supply problems in college campus upkeep

Are insecticide vaporizers effective for fly control?

New G. I. "soap"—milled bar of synthetic detergent

Eleuthere Irenec du Pont (1771-1834) who founded E. I. du Pont de Nemours & Co. in 1802, from a life portrait by Rembrandt Peale. Today, Du Pont marks its 150 year rise from a gun powder mill to production of probably the most widely diversified line of chemical products in the world.





for Water Softeners

#### ... Bath Crystals

#### ... Cleaning Compounds

SNOWFLAKE CRYSTALS is a true sesquicarbonate of soda made by Solvay. A beautiful, snow-white, crystalline product of top quality and purity, SNOWFLAKE CRYSTALS has been used for over 50 years by America's foremost compounders and repackers. Solvay Technical Service is available to help you with any problems regarding your formulae. Contact the nearest Solvay office: there's no obligation. office; there's no obligation.

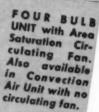
SOLVAY PROCESS DIVISION
ALLIED CHEMICAL & DYE CORPORATION
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Boston • Charlotte • Chicago • Cincinnati • Cleveland • Detroit • Houston
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Soda Ash • Caustic Soda • Caustic Potash • Chlorine • Potassium Carbonate
Calcium Chloride • Sodium Bicarbonate • Specialty Cleansers • Sodium Nitrita
Monochlorobenzene • Para-dichlorobenzene • Ortho-dichlorobenzene
Ammonium Bicarbonate • Ammonium Chloride

## The demand is for VITOZONE ODOROUT

Destroy odors nature's way with clean oxidizing UNIT Area Saturation Circulating Fan.



TWO BULB UNIT with Area Saturation Circulating Fan. Also available in Convection Air Unit with no circulating fan.



· Fuld Bros., Inc. Westinghouse Elec. Carn.

#### Electronic Deodorizers

because they are not household units but SCIENTIFICALLY ENGINEERED FOR INDUSTRIAL, HOSPITAL, INSTITUTION AND PROFESSIONAL USE.

You wouldn't send a boy to do a man's work. Nor sell your customers equipment that will not do the job. That's why Fuld Brothers developed the professional VITOZONE ODOROUT Electric Deodorizer with WESTINGHOUSE ODOROUT high ozone lamps. No chemical odors. No artificial scent. To do an effective deodorizing job, a unit must be designed to handle varied odors and traffic conditions.

You can sell VITOZONE ODOROUTS with confidence. And you'll be getting your full share of the profits as you please your customer with a low cost maintenance deodorizing technique.

The industry knows

FULD QUALITY You can be sure, if it's

WESTINGHOUSE

WRITE TODAY FOR PRICES and LITERATURE Free consumer literature available.

ONLY FULD VITOZONE ODOROUT DEODORIZERS give the greatest air intake so necessary to maximum ozone circulation.

CHEMISTS MANUFACTURING Warehouses in Principal Cities



702-710 S. WOLFE ST., BALTIMORE 31, MD. West Coast Plant: Los Angeles, Calif.



\*\* Candy's NEW NAME for

the new floor treatment for

**Increased Anti-Slip** 

**Greater Durability** 

**Lower Floor Maintenance Cost** 

GRADES

#### CAND-DOX #cs

Originally offered as CANDY'S SUPREME Special WR-AS in July 1950

#### CAND-DOX #BB

Originally offered as BRIGHT BEAUTY Special WR-AS in June 1951 CAND-DOX #CS and BB are made in any total percentage of solids 8% to 18% and in 24% concentrate.

CAND-DOX #CS is slighty more durable and higher priced than CAND-DOX #BB in like percentage of total solids.

(AND-DOX floor treatments represent the finest products available where a higher than minimum recognized standard of anti-slip quality is desired. The resultant films from the use of these products are HARD, non-tacky, and will withstand wear, dirt and discoloring traffic marks.

DURABILITY and ANTI-SLIP ... (AND-DOX) products include a compensating factor—LUDOX\*—in itself harder than wax. The addition of LUDOX\* to the proper wax bases, perfected purposely to accommodate this additive, causes a greater coefficient of friction and therefore greater safety underfoot.

WATER RESISTANCE and REMOVABILITY in proper balance are very important in every maintenance program. In the development of the wax emulsion bases that go into (AND-DOX floor treatments, the important all-around high qualities of our (Standard) CANDY'S SUPREME, BRIGHT BEAUTY and other well known and accepted waxes were taken into consideration and accomplished in the final (AND-DOX products containing the new bases plus additive.

BEAUTY of floors maintained with (AND-DOX floor treatments, which are both hard and very anti-slip, is no less than remarkable and equal to the lustre for which our products have long been famed. The same buffing can be applied, if desired, and the same gloss will result.

Our policy in regard to use of new additives to our floor waxes has always been clear-cut...if a definite improvement can be actomplished we endeavor to formulate and combine new ingredients in such a way as to conform to our very high standards of product function. These standards in no case are ever sacrificed to climb on any "bandwagon" of sales appeal.

The laboratory work in ours or any organization is very important and the starting point for research and development of new useful products. However, FIELD TESTING is the real proof of the real value of any floor treatment. (AND-DOX floor treatments have been thoroughly field tested and are now being sold in quantity by many of our distributors, with success—again proving merit in FIELD USE.

\*\* CAND-DOX contains CANDY'S wax emulsion with LUDOX\* Colloidal silica added in such proportion as to fully deliver the usefulness of this additive to floor wax. \*Trademark of E. I. du Pont de Nemours & Co., (Inc.) Reg. U. S. Pat. Off.

(AND-DOX) is available only for private brand resale except for experimental accounts in Chicago essential to research.

Why not write us today for free samples and prices so that you can make your own FIELD TESTS?

The most complete line of water emulsion waxes of the highest quality available anywhere

CANDY'S SUPREME (Standard)

CANDY'S DELUXE

BRIGHT BEAUTY (Standard)

CANDY'S #640

CANDY'S SUPREME Special WR

#CS CAND-DO

#88 CAND DOX

All the above CANDY products are listed by Underwriters'
Laboratories as "anti-slip floor treatment materials."

Candy & Company, Inc.

2515 W. 351 ST., CHICAGO



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OF SPECIAL INTEREST

## News of Monsanto Chemicals

TO FORMULATORS

#### If you make DETERGENT CLEANERS

If you formulate detergent cleanerseither for resale or private labeling make Monsanto Phosphate Division your headquarters for Phosphates, Detergents and Wetting Agents . . . For many years the Phosphate Division has served the cleaning industry with a growing number of basic chemicals characterized by their unvarying quality and performance across the entire cleaning front . . . Some of these chemicals and their properties are described in these pages. Further information is available at any Monsanto District Sales Office or directly from the Phosphate Division at St. Louis, Missouri. Please get in touch.

#### What do you want in a detergent cleaner?



There are many different qualities demanded of cleaners in industrial, commercial and household formulations. In some cases detergency is of first importance - in others, wetting out, penetration, inactivation of calcium and magnesium ions, sudsing, emulsifying, dispersing, water softening, free rinsing. Whatever the demands of your particular formulation, you can be certain of a Monsanto product, or combination of products, that will meet them with continued satisfaction.



#### Water softeningvaluable property of sodium phosphates

Monsanto sodium phosphates possess the ability to soften water-they have the very valuable property of sequestering certain metallic ions such as calcium and magnesium. (The word "sequester" used in this sense denotes the inactivation of calcium and magnesium ions in solution, rendering them non-reactive.) It is this sequestering action which is responsible for the water-softening quality of Monsanto Sodium Tripoly Phosphate and Tetra Sodium Pyrophosphate - extremely desirable where detergent mixtures are used in hard-water areas.

#### **Detergency and Sodium Tripoly Phosphate**



Used as a builder or detergent aid in soaps and synthetic detergents, Monsanto Sodium Tripoly Phosphate has the special ability to contribute to the detergency of the mixture produced by combination with other alkalies, synthetic detergents or soap. This quality is particularly desirable in industrial detergent compositions used for metals cleaning, dairy-equipment cleaning and dishwashing.

#### DETERGENT CLEANERS in metalworking plants

Some highly interesting information was recently developed by the publication IRON AGE and released in a report entitled "The Buying Influences Related to the Purchase of Metal Cleaners." This report is based on 400 replies received to a questionnaire sent to 2,000 metalworking plants employing 250 or more production workers.

Largest number of replies came from Machinery Manufacturers (123); next, Fabricated Metal Products (93); then Electrical Equipment (66); Transportation Equipment (57); Instruments (21); Metal Furniture (12); Miscellaneous, such as silverware, jewelry (28). Here's

Of the 400 plants replying, 343 used detergent metal cleaners in their production operations-57 reported they were not using cleaners.

Of the 343 plants using detergent metal cleaners, 194 reported using them in washing machines, 263 in dip tanks (some plants used both methods).

There were 224 plants which reported the quantity of detergent metal cleaners used per year-the total, 13,316,327 pounds.

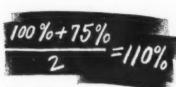
That's quite a market for detergent metal

Santomerse No. 1 is an important ingredient in detergent cleaners.

#### WHO BUYS DETERGENT CLEANERS?

In the IRON AGE report just referred to, there is some interesting information as to who in metalworking plants actually specifies metal cleaners. There were 351 plants which answered the question: "Who decides which type of metal cleaner is to be used?"

Factory Managers and Superintendents (124) were most frequently mentioned-Master Mechanics (3) got the least mentions. Other titles-Process Engineers, Chemists and Metallurgists, Finishing Foremen, Industrial Engineers, Purchasing Agents, Finishing Superintendents, Chief Engineers, Vice Presidents and General Managers.



#### Get this detergency boost with sodium phosphates

One of the most remarkable properties of Monsanto sodium phosphates (both Sodium Tripoly Phosphate and Tetra Sodium Pyrophosphate) is their synergistic action. Synergism may be defined as the "cooperative" effect of two or more separate agencies (such as TSPP and Santomerse No. 1) which results in a combined effect that exceeds the average of the two effects considered independently.

For example, if Santomerse No. 1, with a detergency of 100%, and TSPP, with a detergency of 75%, are combined, the resultant detergency would seemingly be the average of the two, or 87½%. Actually, it is much more—nearly 110%.

Many formulators have found it very profitable to take advantage of the detergency boost made available through synergistic action.



## Thorough rinsing with sodium phosphates

A very valuable property of Monsanto Sodium Tripoly Phosphate and Tetra Sodium Pyrophosphate is their "peptizing" quality—the ability to keep small particles of solids suspended in a water solution so they will not be re-deposited during the cleaning and rinsing cycle. Complete rinsing is thus accomplished since suspended soil particles simply "go down the drain."

#### SOME CLEANING!

Scarcely a second of the day and night passes without a lot of cleaning being done by somebody, somewhere. In the UN secretariat building, for instance, there are 5400 windows and hundreds of mirrors—literally acres and acres of glass that are kept continually clean. Some job! Some market for cleaners!

#### With Santomerse No. 1,



#### it's teamwork that does it

There are 5 combined properties—and actions—in Santomerse No. 1 that have established it as one of the most effective all-purpose detergents and wetting agents used in the formulation of detergent cleaning compounds.

These properties that team up and pull together are: (1) Detergency, (2) Sudsing, (3) Wetting Out, (4) Emulsifying, (5) Dispersing . . . No one of these features is overdeveloped at the expense of the other — all work together, all work hard and effectively.

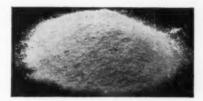
Use Santomerse No. 1 to put combined, all-purpose action into your detergent cleaner formulations. It is available in flake and granular form.

## Doubly active detergent and wetting agent

Santomerse 80 has all the detergent, sudsing, wetting out, emulsifying and dispersing qualities present in Santomerse No. 1, BUT with this difference: Santomerse 80 has double the active content. This represents a savings on the basis of active content alone—also it has an advantage where storage and handling are considerations.

4, Missouri.

Montreal.



### BLENDING ADVANTAGES OF SANTOMERSE No. 1

GRANULAR Santomerse No. 1 is produced especially to give formulators of cleaning compounds a detergent that blends so perfectly with other ingredients that its identity is completely integrated in the formulated product.

Granular Santomerse No. 1 mixes thoroughly and easily with phosphates, silicates and carbonates, making mechanical blends that have much less tendency to stratify. When combined with sodium phosphate, Santomerse No. 1 delivers a detergency bonus through synergistic action.

Chemically, granular Santomerse No. 1 is identical with Santomerse No. 1 flakes. It is equally effective in hot or cold, hard or soft water, in acid or alkaline solutions. It is a rapid wetter and an effective, all-purpose detergent that lifts out dirt and grease, holding dislodged particles in suspension so they are carried away in the rinse.

Formulators interested in a better way to make a better detergent compound are invited to investigate the possibilities of granular Santomerse No. 1. Contact any Monsanto office.

#### MORE POWER if you formulate sprays

If you formulate insecticidal, fungicidal and herbicidal sprays, include the extra wetting power and spreading provided by Santomerse No. 1. It is quickly soluble in water at any pH—adds much to the killing power of your toxicant formulae.

Sentomerse: Reg. U. S. Pat. Of.

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ton, Charlotte, Chicago, Cincinnati, Cleveland,

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Sodium	Tripoly	Phosphate.	Santomerse	No. 1.	Santomerse	No. 1, granular
	Santome	rse 80.				

Name	Title
Company	
Street	
***	7



## Make your package a "LOOKOUT" for sales

You put your product on the alert for sales . . . add silent salesmen to your sales force when you pack in Duraglas sales-packages.

Tall, short, fancy, plain, big or little, Owens-Illinois has hundreds of stock-mold Duraglas containers from which you can choose one that is exactly right for your family of products. Then our packaging specialists add sales punch with an

eye-catching label and closure combination. Result-you have a salespackage with high-powered appeal.

Call us today if you want to give your line an economical sales-package that will fit today's pattern of self-service selling. Remember, no matter what market conditions may be, it pays to put your line on the lookout for those extra, impulse



These Duruglas Imperial Oblongs are ideal sales-packages for your line. Convenient, eye-catching and handy, they offer a complete range of sizes— ½-, 1-, 2-, 3-, 4-, 5-, 6-, 8-, 16-, and 32-ounce.

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LIVE-WIRE DISTRIBUTORS
in Selected Territories...

to climb aboard one of the HOTTEST PRODUCT PROMOTIONS in Sanitary Supply History!

here's the Product!

IT SIZZLES!—because it is currently the most wanted single item in the entire sanitary supply field—BAR NONE

'T MISS because

A product that REALLY removes the SOURCE of toilet-room odors and infectious disease germs... has always been top-dog demand in this business. That SOURCE, as you know, is the smelly crust, stains, rust and organic deposits in the flush ring of toilet bowls—in the traps—in the invisible outlets of urinals.

At long last, you have a product that TOTALLY eliminates this odor-disease-germ source and crab lice shelter. ZAX—with free bowl mirror and mops—DOES IT! It's the revolu-

tionary SUDSING, white emulsion DISINFECTING bowl sanitizer that swabs off the noxious crust by instant chemical action. It deodorizes, descales, cleanses, disinfects . . . replaces harmful single-action acids that neither get rid of the disease germs nor remove source odor.

The ZAX DEMONSTRATOR KIT—see below—proves before the prospect's astonished eyes that ZAX does what no other bowl product can do. Proves it in minutes—to clinch the sale. After that

Zax 4-way BOWL SANITIZER

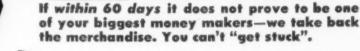
ZAX repeats and repeats and repeats!

#### ... here's the Promotion!

There is more brain power, SALES POWER, push and PROVEN SUCCESS in this ZAX PROMOTION than anything you or we have ever seen in the last

two decades. The NATIONAL

ADVERTISING—in color—reaches
exactly the profitable institutions
—the schools, cafes, government,
hotels, hospitals and industrials
you sell. It spreads out the WEL-



COME MAT for your salesmen.

The smashing DIRECT-MAIL
CAMPAIGN — a tested-out
masterpiece of successful salesmanship—is given to you
FREE — with your name and address imprinted. We not only show you how to
get business by mail, but WE DO IT FOR
YOU.

The Proof-of-the-Pudding DEMON-

STRATOR KIT—with mop and bowl mirror—closes by *actual count* BETTER THAN 4 out of 5 rabbit-quick demonstrations. As a door opener to get your line in, to sell buyers you

never could interest before, to hire and hold better salesmen . . . this demonstrator kit—backed by the FREE ADVERTISING—outranks any past success in sanitary supply history. That you will prove at our risk. But first, SEND FOR BROCHURE,



#### here's the Brochure!

It wraps up the whole promotion quick and clear. When you get it you will see the biggest eyeful of money making merchandising ever presented in a single package. If you paid \$50 for this brochure as a



## IT'S FREE! —and worth its weight in gold!

blue print for sanitary supply merchandising it would be a bargain. Get it free—IF YOUR TERRITORY IS OPEN. Wire, telephone or CLIP THE COUPON. We'll send the brochure by return mail.

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Clip this to your Let	To: HYSAN PRODUCTS COMPANY 932 W. 38th Place
	Chicago, Illinois

SEND THE BROCHURE

Our territory	ls
Company	
Street	
City	



You, like many others, may discover new savings, new profits with these

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#### ULTRA BULK WAXES FOR YOUR PRIVATE LABEL

Many of the nation's largest distributors of world-famous private brand waxes have depended on Ultra as a supply source for more than 15 years. Their experiences prove that Ultra waxes sell better and repeat better, because Ultra waxes are longer wearing, take tougher punishment, are more brilliantly luspumamient, are more minianty took trous. They're self-leveling, self-polish-

Ask for samples, specifications, and curing, non-streaking. rent price schedule.

### ULTRA

ALKYL ARYL SULFONATES

For excellent wetting, good detergency, and fine foam stability, specify Ultra Alkyl Aryl Sulfonates,

SULFRAMIN\* AB-40 FLAKES or POWDER

SULFRAMIN\* AB-CONCENTRATE
FLAKES OF POWDER SULFRAMIN\* E LIQUID

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SULFRAMIN\* SULFONIC ACID SULFRAMIN\* AB SLURRY

One or a combination of these alkyl aryl sulfonates may do a superior job for you. Or a special formulation can be developed to exactly meet your needs.

Let us help solve your detergent problems without obligation.

Write for details!

WORKS

ULTRA CHEMICAL WORKS, INC.



Beauty often begins in a test tube. For example, Drew Research Laboratories has created ingredients now used in several of America's biggest selling shampoos—both soap and synthetic types.

#### DREW CONDENSATE 1011

A synthetic surface active agent with properties which make it excellent for use in cream lotion shampoos, bubble bath preparations and cosmetic creams. Instantly soluble in hot or cold water. Super abundant foaming, effective wetting action. Foams, penetrates and cleans, even in hard water.

#### DREW SHAMPOO BASE M

Soapless synthetic detergent that produces rich, billowy suds in one application. Quick rinsing, it leaves hair absolutely free of suspended oil and dirt. Contains an additive to condition the hair and eliminate "unruliness."

#### DREW BASE S E B

High quality neutral potash soap of coconut oil with instant, profuse foaming action. Clear, brilliant, this aqueous solution presents an exceedingly attractive product with customer appeal. Excellent penetrating and cleansing action.

For quality in your products—look to Drew for the finest chemical ingredients.

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E. F. DREW & CO., INC.

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#### WITH WAXES CONTAINING ANTI-SLIP "LUDOX"

Anti-slip Du Pont "Ludox" gives floor wax a unique snubbing action. When your foot hits the floor, tiny, hard particles of "Ludox" are pushed into larger, softer wax globules. This causes the foot's forward-moving energy to be absorbed quickly and safely—helps keep the foot from slipping.

The added safety of waxes containing "Ludox" can mean greatly increased sales for you. Another big selling feature is their extra hardness. And along with these outstanding advantages, all the basic qualities of gloss, water-resistance, freeze-resistance and leveling are maintained in properly

formulated waxes.

Today, there is a variety of anti-slip waxes made with "Ludox." A continually increasing number of safety and sanitation engineers are specifying them for business, industry, and institutions.

Check up on the growing demand for anti-slip waxes with "Ludox." Ask your wax supplier about them. Or if you want to manufacture a wax made with "Ludox," write for technical information. E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Dept., 4147-C Du Pont Bldg., Wilmington 98, Delaware.



150% Anniversory

Better Things for Better Living ...through Chemistry

**COLLOIDAL SILICA** 



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Unsurpassed for quality and uniformity . . . D&O Replacements faithfully reproduce the fragrance and characteristics of the natural product — at a far lower cost.

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#### CLOND TRITON X-102 Newest non-ionic detergent offered by Rohm & Haas for formulation in metal cleaners has two important requirements for efficient metal cleaning: Q. A cloud point in the 185°-190°F range is right in line with high cleaning tank temperatures. b. Detergent activity, like that of Triton X-100, is outstanding for the following metals: Steels: Aluminum Brass bonderized Copper furniture Iron passivated stainless Write for samples and detailed information. This material has been previously offered as Experimental Detergent 9X-102. TRITON is a trade-mark, Reg. U.S. Pat. Off. and in principal foreign countries. CHEMICALS FOR INDUSTRY

ROHM & HAAS
COMPANY
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> BLOCKSON Sodium Phosphates

Tetrasodium Pyrophosphate

Trisodium Phosphate

Crystalline Monohydrate

> Sodium Polyphos

Sodium Polyphos is Blockson's brand name for a water soluble Glassy Sodium Phosphate with the desirable characteristics of Sodium Hexametaphosphate and Sodium Tetraphosphate.

BLOCKSON IS ALSO A MAJOR PRODUCER OF ...

SODIUM ACID PYROPHOSPHATE

SODIUM SILICOFLUORIDE CHLORINATED TRISODIUM PHOSPHATE

SODIUM FLUORIDE

DISODIUM PHOSPHATE
Anhydrous • Crystalline

HYGRADE FERTILIZER

MONOSODIUM PHOSPHATE Anhydrous • Monohydrate

BLOCKSON CHEMICAL COMPANY

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SOAP and SANITARY CHEMICALS

Selecting a perfume of high quality and distinguished note, will do wonders in selling your product above and beyond other soaps at plint of sero.

The master per mer of van Ameringen-Haebler, Inc. will a educe a distinctive per ume, particularly designed for your product and technically right.

van Ameringen-Haebler, Inc.

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## Have you tested a sample? ... of the new anti-slip

## SAF-FLOR

real anti-slip features based on a newly developed copolymer\*... very high gloss... water resistant in 12-24 hours, no water spot... easier to remove than ordinary floor wax with any regular floor cleaner... successfully withstood damp moppings for 25 consecutive days... freezing will not impair gloss more than 10%... available in any size containers to the trade only — or under your own label... send for full information on this revolutionary water

emulsion wax.

\* Manufactured and patent applied for by
Union Bay State Chemical Co., Cambridge,
Mass. The new polymer also available to floor
wax manufacturers for their own formulations.

#### SHAWMUT SPECIALTY COMPANY

Manufacturers of ZIP-ON FLOOR PRODUCTS for over 20 years

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FLOOR WAX





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MARYLAND GLASS CORPORATION • BALTIMORE 30, MARYLAND

also available in clear glass



## D-40

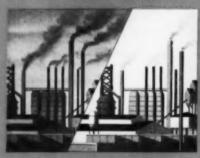
offers great versatility in processing and product formulation to a wide variety of industries



D-40 is helpful in many taxtile operations such



D-40 is an excellent base for dairy equipment cleaning compounds.



D-40 can help relieve amog conditions.

The fields of application for this exceptional detergent are almost limitless because of the versatility and effectiveness of D-40 in cleaning, wetting, emulsifying, emulsion prevention, dispersing and foaming. Whether you are preparing specialty compounds or repackaging, you will find D-40 has a high degree of chemical stability, is rigidly uniform in all its properties, including color and odor.

The reputation of D-40 is backed by Oronite—the world's largest producer of synthetic detergent raw materials. Write or telephone the Oronite office nearest you for information, literature and test data.

#### Particle sizes of D-40 enlarged 5 times



D-405F (Flahes)



D-60 (Granules)



D-4000 (Passeles

Plakes, granules, powder—all offer a wide range of application. Ask

#### NEW DETERGENT BOOKLET!

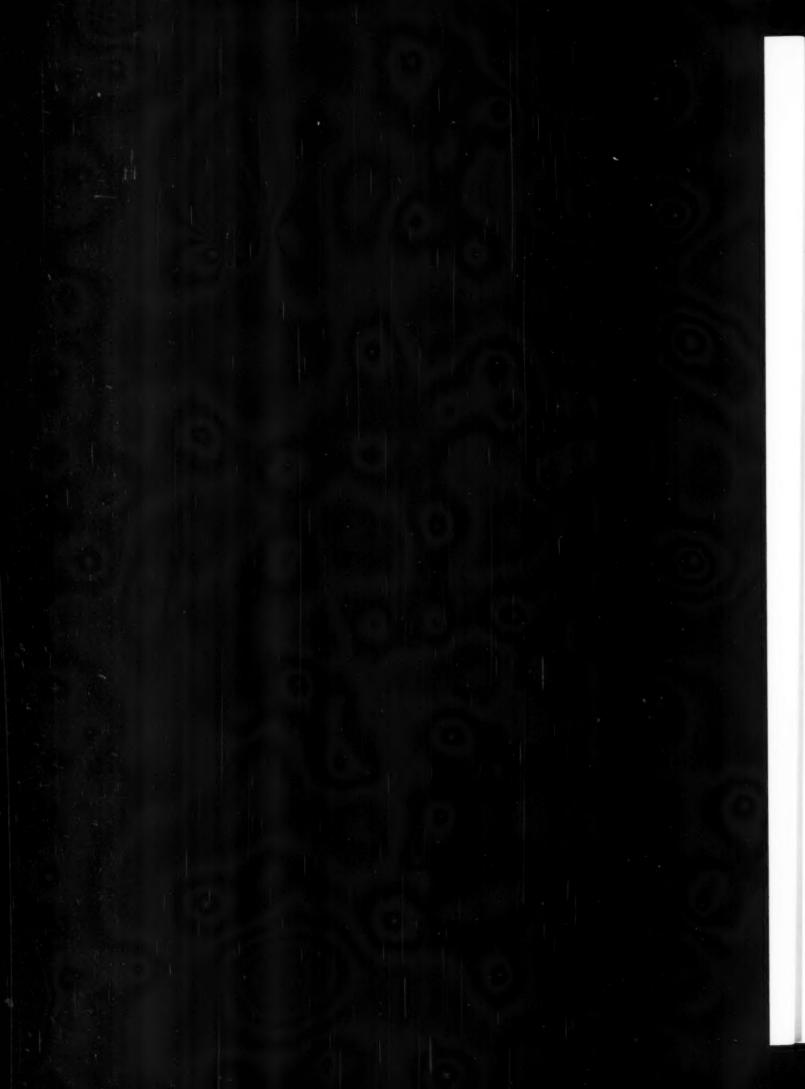
"DETERGENTS"—a 24-page booklet just published is available free of charge. Factual and easy to read, it shows and describes scores of up-to-the-minute industrial uses and applications of detergents. Many such applications provide process improvements; others represent means of product improvement or product cost reduction. Write any Oronite office for your copy.

#### ORONITE CHEMICAL COMPANY

38 SANSOME ST., SAN FRANCISCO 4, CALIF. 30 ROCKEFELLER PLAZA, NEW YORK 20, N.Y. STANDARD OIL BLDG., LOS ANGELES 15, CALIF. 600 S. MICHIGAN AVENUE, CHICAGO 5, ILL.

MERCANTILE SECURITIES BLDG., DALLAS 1, TEXAS





## After Closing..

#### East Coast Soap Expands

A late August completion date for a one story brick addition to the East Coast Soap Corp., Brooklyn, N. Y. was recently announced by S. S. Rudman, vice-president of the company. When completed and equipped, the new structure will increase the floor capacity of the plant by 5000 square feet and will be used for manufacturing new items, especially synthetic detergents. Production will be under way early in September.

East Coast Soap Corp. was organized in 1947 as an outgrowth of the American Soap Powder Works which was founded in 1921. All the former personnel of American Soap Powder Works have continued with the East Coast organization.

#### P&G Introduces "Zest"

Test marketing of "Zest" synthetic detergent in bar form is now under way, it was announced late last month by Procter & Gamble Co., Cincinnati. The new bar form detergent was introduced to Cincinnati and vicintiy at a demonstration meeting in the Netherlands Plaza Hotel, July 24. R. E. Hauber, P&G research chemist, presented a lather test in regular Cin-

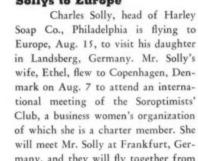
cinnati water using "Zest" and a leading toilet soap. The new detergent was also demonstrated in salt water, in which it produced profuse lather. Its value in avoiding formation of calcium salts and "bath-tub ring," as well as a deodorant type product was also demonstrated.

#### Sollys to Europe

many, and they will fly together from there to Landsberg. The Sollys will see their newest granddaughter for the first time. She is the daughter of Doris Jane and Major Peter Kramer of the Air Force.

#### A. Roy Allison Dies

A. Roy Allison, head of Stevens Grease & Oil Co., Cleveland, died suddenly last month. A director of the Soap and Detergent Manufac-



turers Association until that organization dissolved in 1949, Mr. Allison was a member of the Association of American Soap & Glycerine Producers. He was an attorney.

#### FTC Cites Purex

A complaint charging discrimination in price in conection with the sales of its "Purex" bleach was issued by the Federal Trade Commission, Washington, D. C., recently, against Purex Corp., Ltd. of South Gate, Calif. The complaint charges that Purex violated section 2(a) of the Clayton Act, as amended by the Robinson-Patman Act, by charging jobbers, retailers and cooperative buying organizations higher prices for its products of like grade and quality than it charged other like customers. According to the complaint the effect of alleged price discriminations has been to lessen competition with other competing manufacturers who suffered a loss of business, and tended to create a monopoly for Purex. Another effect, the complaint says was to injure the non-favored jobber and retail customer of Purex.

The complaint also states that Purex sold almost \$20,000,000 worth of products in 1951 in approximately 75 percent of the territory of the U. S. embracing about 33 states with little or no distribution in the Eastern and Atlantic Seaboard states. Sales were made through eight branch plants located at South Gate and San Leandro. Calif.; Tacoma, Wash.; St. Louis; Dallas; New Orleans; Atlanta and Memphis. In addition to "Purex" bleach, the company manufacturers and distributes "Purex" bowl clean, "Purex" drain opener, "Trend" synthetic detergents and "News."

The company has 20 days to answer the charges. A hearing will be held in South Gate Sept. 22 before Hearing Examiner John Lewis.

#### **Antoine Chiris Moves**

Antoine Chiris, New York, recently announced removal of its executive offices, laboratory, manufacturing, shipping and receiving departments to larger quarters in the Stack Building, 212 East 23rd Street. Telephone number is Lexington 2-6035.



#### N. S. S. A. Coast Meeting

A western regional meeting of the National Sanitary Supply Association will be held Oct. 23 and 24 at the new Hotel Statler in Los Angeles, it was announced late last month by Leo J. Kelly, executive vice-president of N.S.S.A. West Coast N.S.S.A. members, and members of the Sanitary & Maintenance Suppliers of Northern California plus those of the Sanitary Supply Association of Southern California are participating in the two-day meeting. John D. Kirby of Kirby Sales Co., Los Angeles is general chairman for the meeting, and is being assisted by Herbert J. L. Baum of Mipro Metal Products Co., San Francisco, N.S.S.A. western regional vice-president, and Philip D. Shore of Shore Metal Products Co., Los Angeles, secretary of the board of N.S.S.A. A meeting of the board of directors of the National Sanitary Supply Association will be held at the Statler in Los Angeles, Oct. 22.

#### Maintenance Show Set

A twelve-man group has been chosen for the advisory board of the Plant Maintenance Show and Conference to be held at the Public Auditorium, Cleveland, January 19 to 22, according to a recent announcement by Clapp & Poliak, Inc., New York, which manages the show. The group includes William Flatow, Jr., assistant general sales manager, West Disinfecting Co., Long Island City, N. Y., as representing the sanitary chemical industry.

#### Lammot du Pont Dies

Lammot du Pont, former president of E. I. du Pont de Nemours & Co., Wilmington, Del., died in a New London, Conn., hospital on July 24, less than a week after the 150th anniversary celebration of the du Pont Company. He was 71 years old.

Mr. du Pont received his degree in civil engineering from Massachusetts Institute of Technology in 1901, and joined the family business in 1902. Between 1926, when he became president of the firm, and May 1940, when he resigned as president to succeed his brother Pierre as chairman of the board, du Pont research spend-

ing was increased almost seventold. Lammot du Pont retired as board chairman January 18, 1948. He was a former president of the Manufacturing Chemists' Association.

#### **Puhl Buys Hilex Plant**

Purchase of the plant and equipment of Hilex Co., in Dallas, Tex., by John Puhl Products Co., Chicago, was announced recently. The transaction does not affect Hilex operations in other parts of the country. The Dallas plant, which begun operations in May, 1941 and represents an investment of \$100,000, manufactures bleaching materials and household disinfectants. Puhl has acquired trade rights to "Hilex" liquid bleach in Oklahoma, Louisiana, Mississippi, Arkansas, and Texas.

#### Lindane Plant for Ethyl

Large scale production of lindane is planned by Ethyl Corp., New York, according to a recent announcement. The insecticide will be made at a plant now under construction in Baton Rouge, La., which is expected to be in operation by early 1953. In addition manufacturing capacity for BHC is being increased.

#### **Revises DDT Inventory Rule**

National Production Authority recently revised its basic inventory regulation No. 1, thereby removing inventory controls from allethrin, DDT, dichlorobenzenes, and numerous other materials. The amendment is intended to reflect changes in the supply-demand situation of materials since April 1952, date of the last large-scale revision of the order. The regulation covers all items in short supply and not subject to restrictions of the Controlled Materials Plan. A number of items currently in short supply have been added to the revised order, and are now subject to the inventory controls of the amended regulation.

The list of scarce materials recently published by National Production Authority continues to include pine oil and pyrethrum. Chlorine has been added. Withdrawals from the list include allethrin, dichlorobenzene (ortho, meta and para), and DDT.

#### **Warwick Names Distributor**

Warwick Wax Co., subsidiary of Sun Chemical Corp., Long Island City, N. Y., recently announced the appointment of Van Waters and Rogers, Inc., as exclusive distributors in the Pacific Northwest. Van Waters and Rogers, Inc., are carrying stocks of Warwick's waxes at Seattle and Spokane, Wash., and at Portland, Ore.

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#### **DDT Exports Rise**

American sales of DDT abroad rose from \$5,050,000 in 1950 representing 24.7 percent of total production, to \$14,752,000 in 1951. Data on total production in 1951 were not available, and it was therefore impossible to calculate the percentage of exports relative to total output.

#### **Barrett Opens New Lab**

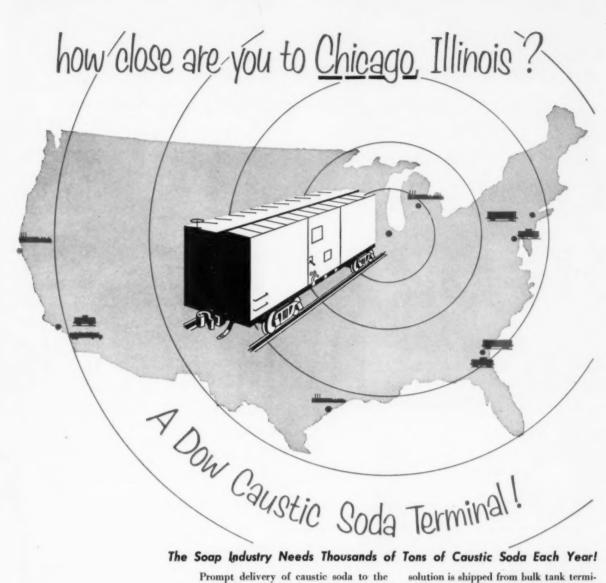
A new laboratory, especially designed for development and testing of industrial materials was recently opened by Barrett Division, Allied Chemical & Dye Corp., New York. It is known as Shadyside Applications Research Laboratory, and D. A. Rankin, superintendent, is in charge. The new laboratory is equipped to enable Barrett technicians to develop, test, and evaluate under simulated production conditions Barrett materials used in various industries.

#### May Supply Business Up

An increased volume of business in May, as compared with April, was reported recently by members of the National Sanitary Supply Assn. participating in the organization's monthly census of business. One exception to the trend was in the case of those firms in the \$5,000 to \$10,000a-month class. Firms in the under \$5,000 category showed an increase in May of 24.4 percent over the previous month, while those in the \$20-\$25,000 category enjoyed a 14.4 percent increase. Business in May, 1952 was better than in 1951 for all those reporting, excepting the over \$100,000 category. A sizable increase (34.1 percent) was recorded for May 1952 by companies in the under \$5,000 class, while those in the \$10-\$15,000 group showed an increase of 8.5 percent.







#### The Soap Industry Needs Thousands of Tons of Caustic Soda Each Year!

Prompt delivery of caustic soda to the soap industry is of the greatest importance as it helps to prevent production lags. For this reason Dow maintains an outstanding network of distribution facilities. In addition to Dow's caustic soda solid, flake and ground flake terminal in Chicago, Illinois -Dow operates caustic soda plants in Midland, Michigan; Freeport, Texas and Pittsburg, California. Dow caustic soda

solution is shipped from bulk tank terminals in Los Angeles, California; Carteret, New Jersey and Charleston, South Carolina. Caustic soda solid, flake and ground flake are shipped from terminals in Port Newark, New Jersey and Charleston, South Carolina. All of these distribution points play an important part in providing the soap industry with the superior service it requires.

wherever you are... you're close to

DOW CAUSTIC SODA

THE DOW CHEMICAL COMPANY . MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Atlanta • Cleveland • Detroit Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle Dow Chemical of Canada, Limited, Toronto, Canada



Now! You may have good profits and enduring sales easier, because—

# CARNAUBA IS HYDRAOXATED INTO SAFE FLOOR DRESSING



Brazilian natives harvest the carnauharvest the carnauba palm tree's waxy fronds. Each palm frond, after it is dried and threshed, yields only a few precious ounces of the raw carnauba.



#### PERFORMANCE RECORD PART OF BIG SALES STORY

		7	JKT		
GLOSS (Unbuffed)		REMOVAL (Detergent scrubbing)	Γ.		
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MAR RESISTANCE	E	EASE OF APPLICATION	-		
ATER RESISTANCE		HEALING			
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E-Excellent C-Complete

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Hydraoxated

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Floor Dressing

No silicas or abrasives added . . . the slip is hydraoxated out!

THE selling is easier when you feature, under your own private label, this self-lustre, hydraoxated carnauba floor dressing.

Think of the sales impact you command when you can say, "My floor dressing is extra safe . . . because the slip has been hydraoxated out of carnauba. In every kind of weather you enjoy beauti-

ful, safe floors . . . even under wet shoes."

That is enough to gain a customer trial. But there is more, much, much more in our sales program to help you quickly attain enduring sales volume.

Write, wire or phone today. Your territory may still be open for distribution.



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#### RENEX'

#### puts real bite in detergents

Renex is the best foundation for better detergents. With Renex you can produce cleaning compounds tailor-made to your market.

For example, Renex can be compounded into commercial laundering powders possessing outstanding advantages.

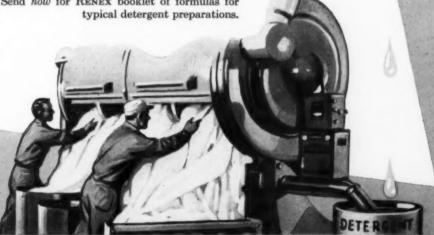
Renex is designed to prevent the formation of excessive suds. It drains rapidly and rinses freely. And Renex is highly effective in cold water or in acids which might be used to protect fabrics where fugitive dyes create a cleaning problem. Here's a formula meant only to serve as a guide and to show one use of Renex:

RENEX									15%
Tetrasodium pyro	pho	sp	ha	te					20%
Sodium orthosilica	ate					4			30%
Soda ash								*	30%
Sodium CMC (tec	hni	ca	1 0	ra	de	1			50%

Nothing equals Renex for increasing the efficiency of soaps, alkalies, or sulfonates. As little as 5% Renex has increased cleaning efficiency as much as 30%! Renex is the best foundation for better detergents for commercial laundries, home laundries, dishwashers, floor and wall cleaners—for the hundred and one household, industrial, and military cleaning jobs.

RENEX is low in cost and made from plentiful raw materials. It is also available in powdered form—RENEX 25. Samples and helpful literature are available for your study.

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Industrial Chemicals Department

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ACID SODIUM PYROPHOSPHATE (ASPP) Anhydrous

CHLORINATED SODIUM PHOSPHATE

DIPOTASSIUM PHOSPHATE (DKP) Anhydrous

DISODIUM PHOSPHATE (DSP) Anhydrous

MONOPOTASSIUM PHOSPHATE - 97% (MKP)

MONOSODIUM PHOSPHATE (MSP) Anhydrous

PHOSPHORIC ACID (75% & 85%)

POTASSIUM PHOSPHATE LIQUOR

POTASSIUM TRIPOLYPHOSPHATE (KTPP)

SODIUM TRIPOLYPHOSPHATE (STPP) Anhydrous

TETRAPOTASSIUM PYROPHOSPHATE (TKPP) Anhydrous

TETRASODIUM PYROPHOSPHATE (TSPP) Anhydrous and Crystals

TRIPOTASSIUM PHOSPHATE (TKP)

TRISODIUM PHOSPHATE (TSP) Anhydrous



- Properly balanced detergent blend that cleans better, faster
- Dissolves film buildup from months of scrubbing and wear.
- Not harsh . . . won't injure fine floors
- · Effective in hard or soft, hot or cold water.

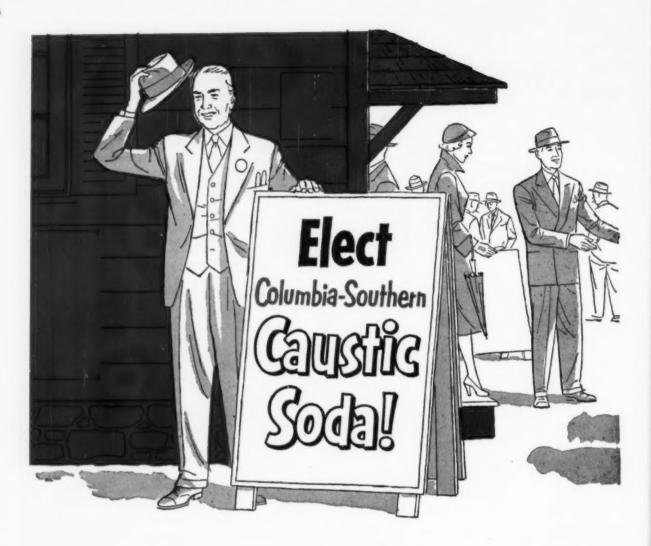
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It shows actual dollars and cents that can be saved on specific jobs.

ORDINARY CLEANER  "peptizes" imbedded dirt and wax penetrates the soil faster. Floor rinses clean, no soapy film.	Peck's Product Co. 610 E. Clarence, St. Louis, Mo.  Send KEEP folder  I would be interested in details about the KEE
Peck's COMPANY	sales plan for distributors.  Name  Firm Address
610 E. CLARENCE, ST. LOUIS 15, MO. Manufacturer of Soaps, Detergents, and Sanitary Chemicals	StreetStateState

SUPERIOR SOIL SUSPENSION-KEEP



Columbia-Southern earnestly solicits you as a customer because it earnestly desires to serve you.

The platform of Columbia-Southern is simple and direct: to produce consistently high purity Caustic Soda, other alkalies and related chemicals.

We believe in doing business fairly, promptly, and efficiently. We believe in serving beyond our normal obligations. We believe in saving our customers time and money whenever and wherever possible.

Elect Columbia-Southern as your supplier!

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Sure Step Wax is the tried and proven safety floor wax. It has been the pioneer . . . the leader. Thousands of hospitals, schools, industrial plants, office buildings and many other Sure Step Wax users, who demand floor safety are using Sure Step Wax throughout their floor maintenance program.



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Sure Step Wax adds new beauty and color to your office flaors.



Sure Step Wax gives new life and sparkling lustre to institutional floors.



Sure Step Wax has the rugged toughness and safety required in industrial plants.



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#### Sure Step Wax—Solves An Old Problem

Sure Step Wax outmodes all ordinary anti-slip floor waxes, with their dull, gummy and tacky surfaces. Sure Step Wax has been discovered to definitely do a better job because it combines safety plus long-lasting, wearing qualities. Requires only 20 minutes to dry to a mirror-like finish. Sure Step Wax will last longer, costs less to clean and maintain.

WRITE FOR SAMPLES, specifications and prices.

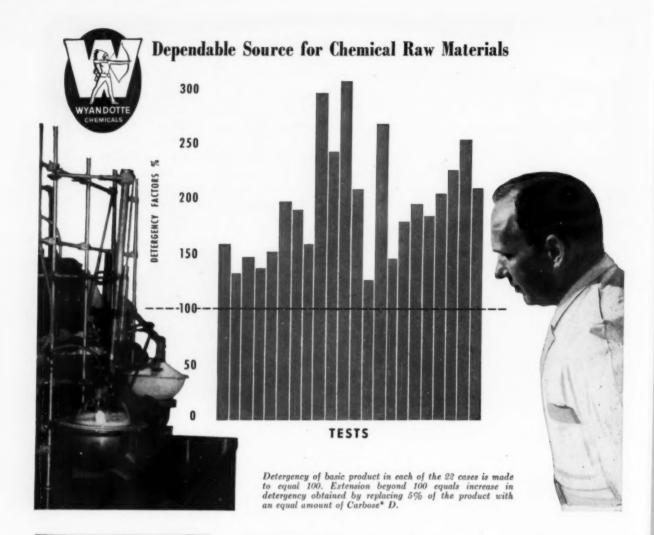
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You'll want to look into this first 100%-active flake nonionic ever commercially available. It's another Wyandotte first. Samples and literature available.

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Soaps and syndets, nonionic and anionic—we tested them all with Carbose D. In the above graph, you can see the results of these careful tests.

In all 22 cases, 5% of Carbose D (Wyandotte's specialized grade of NaCMC) brought an increase in detergency factors . . . as high as 200%! The principal factors improved by 5% replacement of Carbose include carbon soil removal and whiteness retention.

#### Wide Applications

These promoting characteristics of Carbose D make it ideal in the formulation of general household cleaners, hand dishwashing products, laundry compounds, scouring powders, building and maintenance cleaners, and so on. In addition, Carbose promotes long-lasting suds, reduces skin irritation . . . is ideal for dishwashing, car-washing

and other compounds where emolliency is desirable.

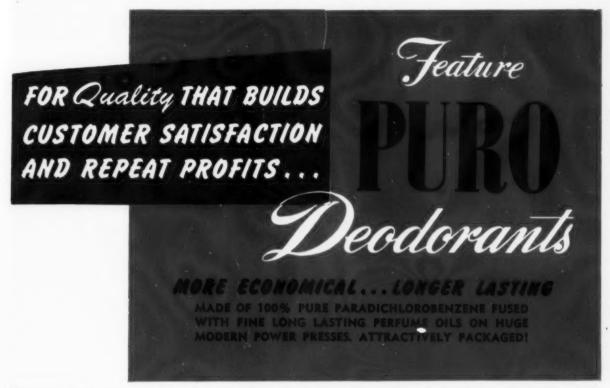
See the Bulletin Board for recent facts on other Wyandotte Chemicals. If you'd like more information on Carbose, its properties and characteristics, and more complete data on these tests, write for our free Carbose booklet. Wyandotte Chemicals Corporation, Wyandotte, Mich. Offices in Principal Cities.

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Emery 600 Distilled Cottonseed Type	34-38	90-110	30Y/15R	197-203	199-205
Emery 610 Distilled Saya Type	24-29	120-125	30Y/8R	195-203	197-205
Emery 614 Distilled Soya Type-Alkyd Grade	18-23	125-130	20Y/5R	193-201	195-203
Emery 618 Dist. Soya Type-Super Alkyd Grade	18-23	135-140	20Y/5R	195-201	197-203
Emery 621 Distilled Coconut Type	22-26	8-18	30Y/6R	255-266	257-268
Emery 622 Double Distilled Coconut Type	22-26	8-15	10Y/2.5R	258-270	260-272
Emery 630 Distilled Corn Type	28-33	105-120	30Y/10R	195-201	197-203
Emery 640 Distilled Palm Type	43-46	45-55	35Y/15R	199-205	201-207



Fatty Acids & Derivatives Plastolein Plasticizers Twitchell Oils, Emulsifiers

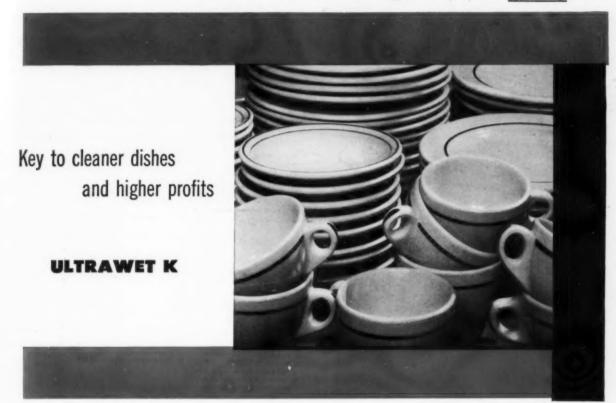
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If you are interested in selling more hand dishwashing compound, you'll find ULTRAWET K the key to cleaner dishes for your customers and higher profits for you.

Of all synthetic detergents, only Ultrawet K combines these important properties:

Concentrated (85% active) for . . . . . low cost

High foaming and detergency for ..... maximum performance

Light color and freedom from odor for . improved physical characteristics

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AUGUST, 1952

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NEUTRONYX 600

Andminist Delergent Working and Contact plans

ONYX OIL AND CHEMIC STARRES AND MORE'S ST desti citt à a. i.

It covers the complete story of one of the most effective wetting and emulsifying agents available today . . .

### NEUTRONYX 600

. . . an aromatic polyglycol ether with a wide range of existing and potential uses where a non-ionic detergent, wetting, emulsifying and dispersing agent can be used.

Page

NEUTRONYX 600

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DDT..... Dry cleaning

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Bringing new light to bear on the varied uses of

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This product is being used by many soap makers as an aid in the development of more efficient and economical processing techniques since its traditional quality and purity are particularly helpful in assuring the production of top quality soaps.

Quality plus cooperation keeps NIALK products at the forefront in research and product improvement.

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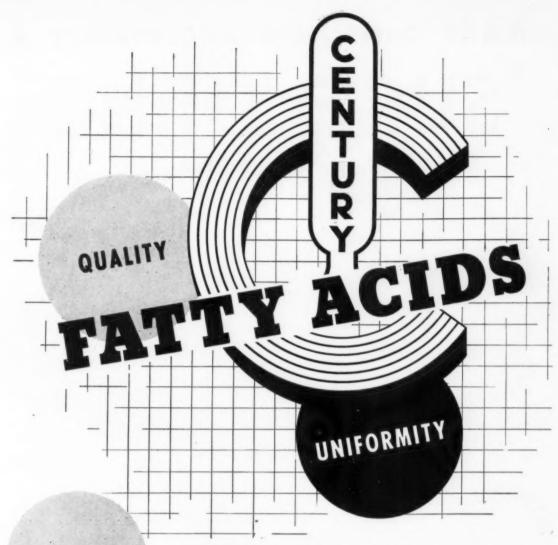
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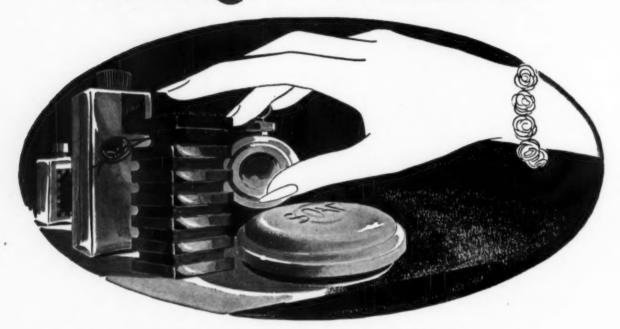
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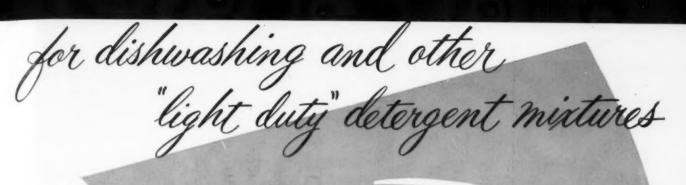
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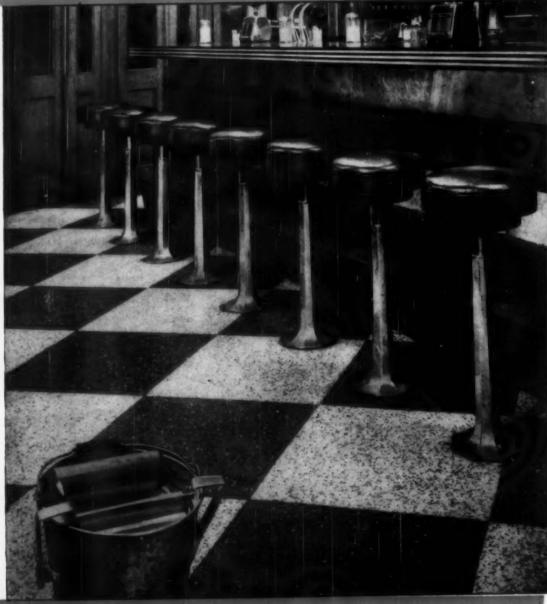
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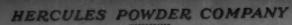
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SOAP and SANITARY CHEMICALS

# ... in brief

as the editor sees it . .

DETERGENT TREND . . . The trend of the moment seems to be toward a wider incorporation of sulfated fatty alcohols in package detergents for the household market. During the past year, some substitution of fatty alcohol derivatives for other detergent materials has been reported. This has included not so much the lauric acid derivatives and the like, but more of the cheaper fatty acids of tallow and grease. With the fact that this may represent a definite trend, the alkyl aryl producers are not at all in agreement.

Projected into the future, however, conceivably this might represent the eventual outlet for a considerable tonnage of by-product inedible fats now hunting a market. With cheap, plentiful animal fats as the raw material bank, this would seem to be the logical road of expansion, the only one able to meet the price competition of the alkyl aryl materials. Eventually, it might be one answer to the prayer of renderers and packers. At the same time, the alkyl aryls are rather firmly entrenched competitively, and would be difficult ever to dislodge by any fat derived products. Just another instance in the current "soap revolution." Where will it take us a few years hence? Who knows?

CHEAPER SOAPS . . . Consumer buying trend is toward cheaper soaps. This we glean from reports from certain areas in the United States and from England. When the old man's pay envelope is not as fat as it used to be, housewives naturally watch the pennies more closely. If, as in England, a penny or two

can be saved by purchasing unwrapped toilet soap or bar laundry soap, such are given the nod over the more expensive wrapped products. Lower-cost items are receiving an increasing portion of the demand in American stores.

Because the public is doubly more price conscious today than a year ago, the tendency to cut prices at all marketing levels is proportionately greater. That this inevitably brings shoddy merchandise in its wake to cater to the pennywise, pound-foolish buyer is historic. Educate the public? This is the \$64 question to which we have yet to see a sensible or workable answer. Personally, we'd rather try to read the Koran to a stampeding herd of buffaloes. If they want cheaper soaps, they'll get them—and get stung in the bargain—but they'll get them.

SALES PRESSURE . . . No great discernment is needed to see that the present rash of soap and detergent sales gimmicks is a direct and immediate descendent of over-production. Too much plant capacity for soaps, and a continuation of the battle for markets between soaps and detergents as well as between brands for all washing products, both in the face of demand at sub-normal levels, only can mean razor-sharp competition and greater sales pressure. In all probability, actual soap and detergent consumption is not as bad as the present three-ring soap sales circus would indicate. But, the boom days of 1950 are as yet not far enough behind us to be forgotten. By comparison, present production and sales appear to be the first step toward the poor house. Top brass pressure on sales departments has been inevitable. It's no secret that the whips are being snapped. Thus, have come mounting sales pressure, sales gimmicks,—and here we are. It would be interesting to know how much additional soap the high pressure has sold,—if any

CHEMICAL STERILIZATION . . . It's been a long fight, Mom, but we won! Chemical sterilization of dairy and milk plant equipment, as specifically compared with sterilization by use of steam, is no longer verboten in and around Washington, D. C. and its milk shed. The use of chemical agents, specifically quaternary ammonium compounds in actual practice, now has the official blessing of the District of Columbia Government and its Board of Commissioners. For most of the past two years, the disinfectant industry headed by the Chemical Specialties Manufacturers Association has fought the ban on chemical sanitization materials in Washington. The abolition of the differential between chemical and steam sanitization on dairy farm score cards used by the Health Department of the District of Columbia, making the use of quaternary ammonium type disinfectants permissible, is a welcome and sensible step.

GLYCERINE OUTLOOK . . . While oils, fats, soaps, et al, are quite plentiful at the moment, thank you, glycerine is scarce. Tight supplies stem directly from a reduced output of soap and fatty acids over the past six months, plus a prolonged shut-down due to a strike in synthetic glycerine production. Seasonal production declines on the part of plants shut down for summer vacations are also a factor. Meanwhile, the consumption of glycerine has not declined. The spot use of glycerine is up and continues to reflect a steady rise in the longrange consumption picture, actually a part of the trend of the past twenty years.

Today, more glycerine is being used for more purposes than ever before. Any serious interference with production thus is quickly reflected in the supply situation, a position in which the market now finds itself. Until supplies come into closer alignment with demand, supplies will continue short. Estimates say that about sixty days will be needed for production, particularly the resumption of synthetic operations, to catch up with demand, and thereafter the market may turn easier.

JUSTICE . . . Imagine the sheriff walking in to sell out your bankrupt plant meeting a process server from the Department of Justice just leaving after handing you the documents accusing you of violation of the antitrust laws. To a degree, this is the spot in which eight rendering companies and six executives of these firms found themselves recently when summoned into court in a civil anti-trust suit. About the merits of the case, we know little. If there has been violation of the anti-trust laws, we wonder who got the gravy. Certainly not the renderers. In effect, battling to keep their heads above water and their plants running, any profits, legal or otherwise, would seem to be conspicuous by their absence. But, the bloke's down. So kick him in the ribs anyway, just in case.

BANDWAGON . . . With a presidential election but a couple of months away, the political bandwagon motif takes over our advertising and merchandising front lines. But, it is for Colgate to emulate the twohorse rider of the circus and climb aboard two band wagons with a single advertising fillip. The newspapers tell us that C-P-P has issued 400,000 "campaign buttons" designed to be worn by grocery clerks, and we assume small boys and button collectors, bearing the slogan, "Vote for Chlorophyll Green." This is designed to call attention to the presence of chlorophyll in Palmolive Soap as might be assumed, the presence of which in said soap had caused nary a ripple for a half-century or more. Then add the "vote" idea, and up comes a double barrel appeal which should sweep the plains of Illinois, Kansas and Iowa.

### as the reader sees it . . .

### **Armour Plant Fire**

Editor:

Undoubtedly you read or heard where Armour and Company had a fire at their North Bergen, New Jersey, plant. The fire, as described, was greatly exaggerated. It was confined to one floor in our spray tower division and did not interrupt to any degree our operations. We were back the following Monday morning operating as usual.

T. F. Sheehy, plant manager Armour & Co.

North Bergen, N. J.

We are glad to bear that the fire did no great damage and that the plant is now back in production. We also appreciate Mr. Sheeby letting us have the facts on the fire—Editor.

### Transposed Paragraphs

Editor:

There is a printer's error on page 141 of the July issue of Soap and Sanitary Chemicals in my article "Evaluation of Antibacterial Activity." Some paragraphs in colums two and three were transposed. The paragraphs in column three starting with, "For all practical purposes . . . "

through "... results of these tests are presented in Table 14." and the paragraphs in column two starting with "The negative results ..." and ending with "... demonstrations of the rapid lethal activity of Bactine." should be transposed.

Eugene M. Britt,

Associate Research Bacteriologist Miles-Ames Research Laboratory Elkhart, Ind.

We apologize for the transposition, which will be straightened out in the reprints which will be available shortly by writing to the author— EDITOR.

### Floor Wax Trade Rules

Editor:

Will you please advise us to whom we can write to obtain a copy of the rules proposed by the Federal Trade Commission. I refer to the 20 trade practice rules for the floor waxfloor polish industry, recently proposed by the Federal Trade Commission.

It is sixteen years ago since I had the pleasure of calling at your office in New York and possibly the gentlemen whom I met at your place on that occasion are retired from active business now. I recall, however, that visit with special pleasure and again express appreciation for the extraordinary good service which you have now given over many years in the publication of Soap and Sanitary Chemicals.

S. W. Peterson

S. W. Peterson & Co., Ltd. Wellington, New Zealand

A copy of the trade practice rules promulgated sometime ago but not yet in force are being sent airmail to Mr. Peterson—Editor.

### Screen Insecticide

Editor:

Following is a paragraph taken from a newspaper:

"A new method of controlling houseflies uses strips of screen dipped in an insecticide (dieldrin) and hung along the ceiling. Flies are attracted irresistibly to the strips and die soon after contact."

We shall appreciate any information you might have as to where we might obtain the above mentioned insecticide.

> Robert Bogel, Bogel Sales Co. Port Arthur, Tex.

The insecticide dieldrin is now made and marketed by Shell Chemical Corp., Denver, Colo. Shell recently acquired the stock of Julius Hyman & Co., Denver, after baving marketed dieldrin and aldrin since their commercial introduction in 1950, when they were made by Hyman. Following lengthy litigation, a court order granted patent rights on the insecticides to Velsicol Corp., Chicago, wth which firm Shell recently concluded an agreement for exclusive rights, worldwide, for both insecticides.

As for the method of dipping strips of screening in an insecticide and tacking them to the ceiling to control flies, such a fly control technique was described by Pimentel, Schwardt and Norton of Cornell University in an article "New Methods of House Fly Control in Dairy Barns," published in the January, 1951 issue of Soap and Sanitary Chemicals. A reprint of the article has been sent to Mr. Bogel—Editor.



# Milled Detergent Bar By C. F. Jelinek, R. L. Mayhew, and J. A. Yeager\* Central Research Laboratory General Aniline and Film Corp.

INCE there have been several excellent reviews on bar detergents within the past few years, (1, 2) we shall not attempt to give a general review of this interesting field, but will confine the discussion of past work to the development of bars for military usages.

Although bar soap has been used for centuries for civilian purposes, the development of a satisfactory bar for military purposes has presented problems of singular difficulty, since it must perform satisfactorily in waters of all degrees of hardness from extremely soft water to sea water. Prior to the development of synthetic detergents, coconut oil or palm kernel oil soaps were specified by the government in Federal Specification P-S-611 for usage in salt water. (3) However, it was recognized that these soaps were deficient in lather in sea water, and that excessive amounts were required to clean satisfactorily in such water.

After Pearl Harbor, the United States was cut off from its source of materials for soap conforming to Federal Specification P-S-611. As a result, a Navy request of March, 1942 for about five million pounds of coconut oil soap brought forth bids for a total of only one and one-half million pounds of this soap. (4, 5) Fortunately, research prior to Pearl Harbor led to soap-synthetic bars which were superior in sea-water lathering and cleansing ability to coconut oil soaps,

(5) so that both the Army and Navy were able to issue specifications (6, 7, 8) for bars which could be used in military operations. These specifications called for bars in which the salt-free detergent-soap ratio varied from 0.5 to one. In the case of the Army, the specification called for a soap which contained 10 to 30 percent coconut oil in the stock, while the Navy called for a well-made, boiled, settled kettle soap. These bars had better sea-water detergency at lower concentrations than did the coconut oil soap, but the lather in sea-water was still far from comparable in amount and quality with that obtained with toilet soap in moderately hard water.

After World War II, the Armed Services were interested in obtaining bars which would perform better in sea water. In 1950, the Quartermaster Corps sponsored a project with General Aniline and Film Corp. for the development of an all-purpose bar suitable for use in soft, hard, and sea waters. A chief object of the contract was to develop a bar which contained only domestically available non-strategic materials. Thus, all products obtained from coconut oil or palm kernel oil were excluded.

This all-purpose bar must be suitable in all hardnesses of water up to sea water for the following uses:

- (a) General purpose toilet soap
- (b) Mess kit and similar equipment cleansing
- (c) Manual laundering of clothes
- (d) Shaving soap

Reflecting the desire for greater sea-water suds, we were asked to develop a product which would yield a minimum of 100 ml. of foam in a one percent solution in soft, hard, or sea water according to the Army test, even though U. S. Army Specification 22-2759 requires only 50 ml. of foam.

In the examination of bars prepared in our laboratory, we first evaluated them by hand-washing in cool Easton, Pa., tap water (about 60 ppm hardness) and in synthetic sea water (7, 8). The ability of a given bar to lather was rated excellent, very good, good, fair, or poor, with the lathering of high-grade toilet soap in tap water being rated as excellent, and that of World War II military bars in sea water as poor. At the same time, the creaminess as well as the volume of lather was noted. Other important characteristics, such as "slip" during washing, and tendency to leave a sticky feeling on the hands after drying, were noted. Those which gave a promising lather were evaluated for skin detergency by washing hands soiled with such materials as gear oil, (9) lanolin, GAF Synthetic Soil, (10) and this soil mixed with lanolin or gear oil. Although such tests were important for determining skin detergency, none of these soils exerted such a deleterious effect on lather as did the natural skin

Foam volume tests of one percent solutions (U. S. Army Specification No. 22-275) were also made on combinations which were promising in the hand-washing tests. As will be

<sup>\*</sup>Paper presented at 38th Mid-Year Meeting, C.S.M.A., Boston, June 10.

shown later, poor correlation was obtained between lathering on handwashing and the foam height test. Since a bar will be judged in use to a large extent by its ability to lather well during washing, we gave much more weight to the hand-lathering test, even though it was subjective and did not give us numerical data. Great weight was also placed on the physical form of the bar. That is, it should not be unduly soft, crack on drying, "bloom" on storage, pit or slush during usage, or become unduly wet, soft or sticky on storage under conditions of high humidity. Finally, bars which appeared most promising after the previous tests were evaluated for cotton detergency, shaving, and dishwashing.

During World War II our company had developed Detergent No. 92, a mixture of anionics which was suitable for use in both the Army and Navy Bars. Both Flett and co-workers (11) and Harris (12) have described soap-alkylaryl sulfonate formulations which were satisfactory for military specifications for sea water bars. Because of this demonstrated compatibility of anionics with soap, and of the large quantities of alkylbenzene sulfonates manufactured in the U. S., it was decided to make the alkylbenzene sulfonate-soap combinations one of our main avenues of approach for the development of a satisfactory bar. It was decided that two major goals remained to be achieved: 1) increase of lather, especially in sea water, and

2) elimination of the sticky feeling after use of bar.

Previous work in GAF during World War II had demonstrated that certain surfactants, which of themselves were poor low concentration foaming agents and detergents, increased the lather in hard water of combinations of soap and anionic detergents. The most promising lathering agents found in our previous work were "Nekal A" and "Aerosol AY." As Simpson (13) has pointed out, similar results had also been obtained at other laboratories during World War II, with the result that OOMG Specification 100A allowed for the incorporation of short chain surfactants as foaming agents in the bar. At the start of our program for the Quartermaster Corps, we studied combinations of these lathering agents with "Sorapon SF," a dodecylbenzene sulfonate, with the view in mind of finding the best "Sorpon SF"-lathering agent combination, coupled with the best binding

Table I shows the beneficial effects which can be obtained by the use of these lathering agents.

The results with the first bar merely depict the well-known deleterious effect of water hardness on the utility of soap. It may also be noted that tallow soap is a relatively poor lathering agent even in fairly soft water. The alkylbenzene sulfonate by itself foams much better than soap in sea water, but does not give a bar of satisfactory physical form. A 40-40-20

mixture of Sorapon SF, Nekal A, and Aerosol AY gives an increase in lather in sea water over the Sorapon SF alone, but this mixture also makes an unsatisfactory bar because of the lack of a proper binding agent.

Binders are an essential and important part of most bar formulations. By careful selection they can impart many desirable properties to the bar. Their chief purpose is to serve as a medium in which all of the ingredients can be mixed and pressed into a homogeneous usable bar. They can be used to control the rate of solubility of the bar, improve slip and feel, stabilize it against changes in humidity which cause softening or drying out, and improve appearance.

The salt water bars used by the Services in World War II all contained soap as a binder. Soap not only has the obviously desirable property of imparting a soap-like character to the bar, but also contributes to the detergency, even in sea water. (5, 11, 12) The chief disadvantage of soap is that it exerts a defoaming action on many surfactants in hard water. For example, the lather obtained with a 25 Sorapon SF-75 soap bar (Table I) is much less than is desirable. Some improvement is obtained by using a 10-10-5 ratio of the three-surfactant combination with tallow soap, but not enough to make the bar satisfactory.

This defoaming action of soap on some sulfates or sulfonates has not been explained completely. It has been attributed by Miles and Ross (14) to the formation of mixed calcium salts of low solubility of fatty acid and anionic detergent. Although he was discussing lime soap dispersion rather than foam, Valko (15) has postulated the formation of complexes of nearly colloidal size of calcium soaps and anionic surfactant. Formation of double salts or of complexes would remove the synthetic anionic detergent from solution. Aside from the synthetic surfactant being physically removed from solution, defoaming action may be exerted by the entry of stearate ions, (16) colloidal limesoaps, mixed salts, or complexes into the foam film.

Since the formation in situ of insoluble soaps, mixed salts or com-

Table I—Effect of Lathering Agents on Alkylbenzene Sulfonate-Soap Combinations

		00	mbinana	1113	T.	ather
	Synthetic Surfactant	%	% Tallow Soap	Binder	Tap <sup>1</sup>	Sea
1.	**************	_	100		F	Almost none
2.	Sorapon* SF Conc	100	_	****	E	VG
3.	Sorapon SF Conc Nekal* A Aerosol* AY	40	_		E	E
4.	Sorapon SF Conc	25	75	_	F	P
5.	Sorapon SF Conc Nekal A Aerosol AY		75	_	G	F
V(		G = Good F = Fair mately 60		P = P	oor	

AUGUST, 1952

plexes of soap and anionic have such a deleterious effect on lather, an investigation was made of bars in which dry, powdered, insoluble soaps were the chief ingredients. Because of the lower binding power of these soaps, it was necessary to incorporate a dextrin or gum in the bar to obtain the necessary cohesiveness. The results obtained are shown in Table II.

For comparison, the results obtained with the 10-10-5 surfactant combination and tallow soap are included from Table I. An appreciable increase in tap water lather and a remarkable increase in sea water lather were obtained by the substitution of calcium stearate for tallow soap. This calcium stearate bar lathers as well in sea water as does a high grade toilet soap in soft water. Similar results were obtained with zinc stearate, magnesium stearate, and aluminum stearate. Calcium resinate gave results much inferior to the stearates.

This suitability of polyvalent metal soaps for use in bars is surprising at first glance, especially when consideration is made of the fact that only about 19 percent of surfactant on the active basis is present in these bars. Time did not permit us to explore this phenomenon, but we feel that the pound for pound superiority of these insoluble soaps over tallow soap may be due to two causes:

- No insoluble mixed soapanionic salt or complex, which would precipitate some of the surfactants, is formed.
- 2) The particle sizes of the insoluble soap ingredients are too large to exert the defoaming action of stearate ions, or colloidal forms of: lime soaps, mixed fatty acid-anionic salts, or complexes formed in situ.

Bars substituting sulfosuccinates of varying ester chain lengths for Aerosol AY were also made, but none of them was as good as the bar containing Aerosol AY. Likewise, substitution of short chain alkyl sulfates, or diamyl benzene sulfonate for Aerosol AY gave bars of deficient lather.

A brief study of the substitution of sodium tripolyphosphate and urea for varying amounts of calcium stearate was made, but in all cases the lather was affected adversely to some

The bar containing an insoluble soap which was chosen for further study had the following composition: tap and sea water, and had good slip. However, it did not have a real soaplike slip, and for this reason, a study was made of tallow soap bars containing more than 25 percent total sur-

### GAF Bar No. 30

50%	Calcium	Ste	arate	
10%	Sorapon	SF	Conc.	
10%	Nekal A			
5.96	Aerosol	AV		

13% Gum No. 198 2% Corrboxymethylcellulose

10% Water

The anhydrous, salt-free surfactant content of this bar is thus about 19 percent.

This bar lathered well in both

factant. The results are summarized in

(Approximately 85% active) (Approximately 55% active) (Approximately 100% active)

As can be seen, a bar with slight improvement in lather is ob-

### Table II—Bars Based on Insoluble Scaps as Binder-Fillers

%	%	%		%	%	%	Lat	her
Sorapon SF Conc.		Aerosol AY	Soap	Soap	Gum 198	H₃O	Tap	Sea
10	10	5	Tallow	75	_	_	G	F
10	10	5	Calcium Stearate	50	15	10	VG	E
10	10	5	Zinc					
			Stearate	50	15	10	G	E
10	10	5	Magnesium Stearate	50	20	5	VG	E
10	10	5	Aluminum				~	
20	20	10	Stearate	50	15	10	G	E
20	20	10	Calcium Resinate	25	25	_	G	F

### Table III—Comparison of Tallow Soap and Calcium Stearate as Binding Agents

c	%	%	%	% Tallow	% Calcium	% Gum	9/	Lat	her
	F Conc.	Nekal A	Aerosol AY	Soap	Stearate	198	H₂O	Tap	Sec
	10	10	5		50	15	10	VG	Е
	10	10	5	75	_	_		G	F
	15	15	7	63	-	-	-	G	G
	15	15	7	26	27	-	10	F	G
	20	20	10	50	-	-		E	E
	20	20	10	_	20	25	5	E	E

### Table IV—Comparison of Bars Containing 50% Sorapon SF-Nekal A-Aerosol AY Combinations and 50% Tallow Soap

%		%	%			Net Foo	ım (ml.)
Sorapon	%	Aerosol	Tallow .	Lath	IOT .	Dist.	Sea
SF Conc.	Nekal A	AY	Soap	Tap	Sea	H <sub>2</sub> O	H <sub>2</sub> O
20	20	10	50	E	Е	170	135
50			50	F	P	174	98
_	50	-	50	F	G	150	156
-	_	50	50	F	F	226	92
20	30	_	50	G	G	156	162
25	25	-	50	VG	G	166	162
25		25	50	E	G	220	160
-	25	25	50	E	G .	184	142
30	20	_	50	E	F	118	138
30		20	50	VG	G	168	162
40	10	-	50	VG	P	176	136
40	-	10	50	E	P	76	52
25	20	5	50	VG	F		
20	25	5	50	E	G		*

tained when a 20-20-10 mixture is incorporated with tallow soap, as compared with a 10-10-5 mixture and calcium stearate. Definitely smaller amounts of lather are obtained with a 15-15-7 surfactant combination, whether tallow soap or a tallow soapcalcium stearate combination is used as a binder. Thus, a very significant increase in effectiveness is obtained when the total synthetic surfactant combination is increased from 37 to 50 percent (from 28 to 38 percent on the active basis) if tallow soap is present in the bar, with the result that the latter bar lathers as well as the 50 percent surfactant combination containing calcium stearate.

Because of the encouraging results obtained with tallow soap by the increase of total surfactant to the 50 percent level, a study was carried out on bars consisting of approximately 50 percent Sorapon SF-Nekal A-Aerosol AY combinations and 50 percent tallow soap.

Table IV shows the results obtained in this study. Consideration will first be made of the hand-washing lather results in tap and sea waters, and then of the correlation between these results and those obtained in foam volume tests.

### Conclusions

THE following general conclusions can be drawn from Table IV:

- 1) None of the three surfactants alone lathers satisfactorily with tallow soap, although both Nekal A and Aerosol AY are better in sea water than Sorapon SF.
- 2) Either Nekal A or Aerosol AY boost the lather of tallow soap-Sorapon SF combinations, but they are not sufficiently effective lathering

agents by themselves to give results in sea water equivalent to that obtained with toilet soap in Easton tap water (60 p.p.m.).

- 3) Nekal A and Aerosol AY together are much better than either alone with tallow soap, but the sea water lather goal set by us was not achieved.
- 4) Both Nekal A and Aerosol AY must be present with the Sorapon SF-tallow combination to obtain the proper lather in sea water and moderately soft water.
- 5) A 20-20-10 ratio is about the optimum for the three surfactants in a tallow soap bar.
- 6) At best, only slight correlation is obtained between the foam volume test and ability to lather in actual usage. This may be partly due to the fact that higher concentrations of the bar are used in hand washing than in the foam test.

The optimum alkyl group for the alkyl naphthalene sulfonate is probably the isopropyl group, since Nekal A gives considerably better lather than Nekal BX, in which the alkyl chain is an isobutyl group. Likewise, there is an optimum ester chain length for the sulfosuccinate, since Aerosol IB is not quite as good as Aerosol AY, and Aerosol MA and OT are definitely inferior.

Substitution of sodium mono-

sodium monobutylbiphenyl monosulfonate or sodium dibutylphenylphenol disulfonate was used instead of Nekal A, a decrease in lathering ability was noted.

None of the commercially available short chain alkyl sulfates studied was as effective as Aerosol AY. Sodium 2-ethyl-2-hexenesulfonate increased the lather of Sorapon SF-Nekal A bars, but was not quite as effective as Aerosol AY. Likewise, substitution of sulfotricarballylates, sodium monoor dibutylphenylphenol sulfonate, or sodium butylbiphenyl sulfonate for Aerosol AY gave bars which did not lather as well as the corresponding bar containing Aerosol AY.

Finally, a brief study was made of the replacement of all or part of the tallow soap with sodium tripolyphosphate, dextrin, zein, urea or lignin derivatives. In no case was an improvement in lather obtained, and in cases where the same lathering ability resulted, the physical form of the bar was inferior to that based on tallow soap. After the work of Keenan (17) was reported, the replacement of the tallow soap with combinations of starch, lecithin, and talc was investigated, but again no particular advantage was obtained.

The following bar based on tallow soap was finally selected for further study.

### GAF Bar No. 275

47% Tallow Soap 20% Sorapon SF Conc. 20% Nekal A

10% Aerosol AY Carboxymethylcellulose 1% Perfume

butylphenylphenol monosulfonate for Nekal A gave a bar which lathered as well in tap water, but its sea water lather was not quite as good. When

(88% soap, 12% H₂O) (Approximately 85% active) (Approximately 55% active)
(Approximately 100% active)

The anydrous, salt-free surfactant content of this bar is thus about 38 percent.

(Turn to Page 161)

### Table V-Comparison of Bar Nos. 30 and 275

	1-	41	Net n	al. Foam²	U	anna inital			
Bar	Tap	Sea	Dist. H₂O	Sea H₂O	75% R.H.	100% R.H.	Skin <sup>2</sup> Detergency	Shaving	pH <sup>a</sup>
30 275	E	E	115 170	110 135	1.0 (N.C.) 3.1 (N.C.)	3.6 20.0	Satisfactory Satisfactory	Satisfactory Satisfactory	7.9 9.5

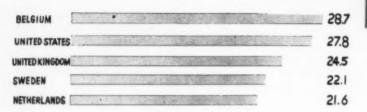
1 % Increase in wt. after 48 hours exposure to relative humidity specified.

N.C.—No change in appearance and feel. U. S. Army Specification No. 22-275, April, 1948.

1% in water at 25°C.

### ESTIMATED SOAP SALES PER CAPITA BY COUNTRIES

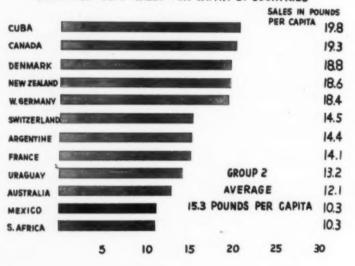
SALES IN POUNDS PER CAPITA



### GROUP I AVERAGE 24.9 POUNDS PER CAP.

5 10 15 20 25 30

### ESTIMATED SOAP SALES PER CAPITA BY COUNTRIES



### ESTIMATED SOAP SALES PER CAPITA BY COUNTRIES

						SALES IN	
JAMACIA	8.5		E11.				9.4
EIRE	100	No All Sales	18.50				9.4
COLUMBIA	- s	100					7.0
VENEZUELA	8.7						7.0
ITALY	102			GRO	10 3		6.9
DOMINICAN	R.	7 ~ 1	AVEDAG		UNDS PE	CADITA	6.5
PHILLIPINE	R. Date	4 . ' 5 %	AFERM	e o.e ro	ONDO PE	. write	6.2
PUERTO RIC	0	4 35					5.5
BRAZIL	15 k						5.4
JAPAN							3.9
JAVA							3.9
PANAMA			*				3.4
INDIA							.4
		5	10	15	20	25	30

### Soap Use



Chart 1

Chart 2

Chart 3

IGURES for the per capita soap consumption of thirty countries recently have been collected and

tabulated by the Association of American Soap & Glycerine Producers. The figures are believed to be reasonably accurate, but if there are any known corrections or additional data, these would be welcomed. Charts 1 to 3 inclusive show the per capita consumption of soap by countries ranging from the highest, Belgium with 28.7 pounds, to India, the lowest with 0.4 pounds.

Soap, indicated by the number of pounds alone, may not be an absolute indicator of relative cleanliness. One reason for this is the fact that some soaps may have a greater fat content and more detergency than others. For instance, liquid soap with a high water content, weighs a lot but would not have the same detergency as the same weight of pure unbuilt soap. We have used such figures as we could get, but by looking at the fat consumption for soaps in comparison with soap production, there is an indication that in detergent value of the products consumed, the United States would rank ahead of Belgium.

We have divided these thirty countries into three groups-those using twenty pounds and over; those using from ten to twenty pounds, and those using less than ten pounds. In referring to averages by groups, we have omitted India from the third group. In many cases, there is a similarity between types of countries in the same group. By and large, the more industrialized countries are in Group 1 showing the higher per capita soap consumption. The basically agricultural countries are in Group 3 showing the lowest per capita soap consumption. We will refer to these three groups in succeeding charts. Since this material has never before

\* Extracts from an address at Rutgers University, July, 1952.

### Today...

### By Roy W. Peet\*

Assn. of American Soap & Glycerine Producers

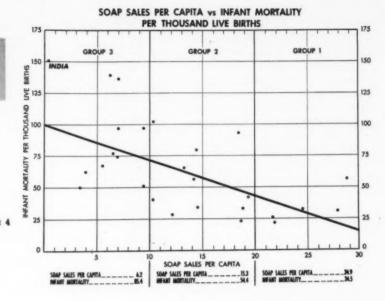
been assembled or presented, we believe it may be of unusual interest.

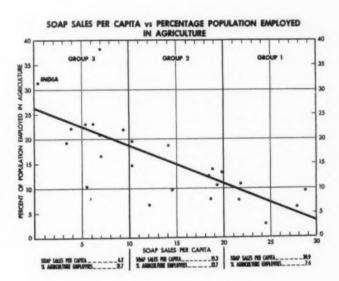
Chart No. 4 shows soap con- Chart 4 sumption versus infant mortality and this is expressed in terms of deaths per thousand live babies, and does not include stillborn babies. The chart is made up with higher infant mortality at the top and higher soap consumption at the right. The left hand group, with the lowest soap consumption, averages infant mortality of 85.4, the middle group 54.4, and the right hand group, with the highest soap consumption, averages 34.5 so that the higher soap consumption and lower infant mortality go along hand-in-hand.

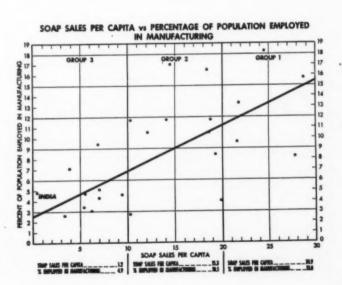
The purpose of this chart on infant mortality is not to prove that the use of soap is the total answer to health and length of life. Diet and public health programs and precautions have been proven of paramount importance in reducing infant mortality rates. Health authorities agree, Chart 5 however, that cleanliness is not only desirable, but is an essential part of such public health programs.

Chart No. 5 shows soap consumption versus agricultural employment with the percentage of population employed in agriculture increasing going up the chart, and the consumption of soap increasing to the right. In the left hand group, with the lowest soap consumption, we have an average of 21.7% of the people employed in agriculture; in the middle group 12.7%, and in the right hand group-showing the highest soap consumption-7.4%. Thus, the higher the percentage of people employed in agriculture, the lower soap consumption seems to be.

Chart No. 6 may be considered the reverse of this in that it shows Chart 6 soap consumption vs. employment in







S

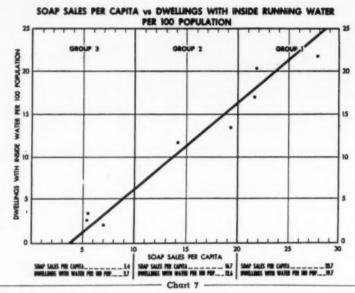
manufacturing. The percentage of people employed in manufacturing increases as you go toward the top of the chart. Soap consumption increases as you go to the right. In the left hand group, the percentage of employment in manufacturing averages 4.9%, in the middle group 10.5%. and in the right hand group 13.0% so that as more people are employed in manufacturing, the tendency is to use a greater quantity of soap. This says statistically somewhat the same thing we mentioned earlier about the increase of soap consumption as the world became industrialized.

Chart No. 7 shows soap consumption vs. dwellings with inside running water per hundred population. Probably no one ever heard of such a term before, but since we had statistics from eight countries on dwellings with inside running water, we thought we would lay it out in the same sort of chart and see the correlation with soap consumption. It is striking how soap consumption goes up (to the right) as the dwellings with inside running water go up.

### **Competition and Marketing**

CUCCESS in the soap industry, it has been said, depends on two things: 1. The soundness of raw material purchasing, particularly fats and oils, and 2. Able marketing or selling. To this, certainly a third elementproduct quality or service-must be added. Then we have included purchasing, research, manufacturing, selling, and advertising. The only major department omitted is finance. We have to know costs, keep accounts, pay bills, borrow money, pay interest, make periodic statements, etc. So, success really depends on excellence in every phase of a company's operation, with good management and teamwork essential to drive toward the ultimate objective of company profit.

Coming back to product quality or service, it is not enough that a manufacturer wants to enter a field or to get increased tonnage. He must serve first in order to profit. This service may be in lower price, in quicker delivery, in better performance, in greater convenience, or in some other manner. But the manufacturer must know how he will serve



and be honest with himself about it. If he is not serving better in some way, there is no real reason for people to change to his product and they can be mighty stubborn and hard-hearted about it. The truth of this observation can be proven by many tragic product case histories in the industry and by some outstanding product successes.

The market for soaps and detergents probably runs about 16 to 18 per cent of the total for industrial products, that is, products sold to and consumed by industrial buyers and the balance of 82 to 84 per cent to household consumers. About five per cent of the industry tonnage is liquid and 95 per cent non-liquid.

The industrial tonnage is sold principally on a direct basis, although in many cases wholesalers serve a very definite and valuable purpose. There is no actual breakdown of industrial tonnage by end use. A rough estimate for the year 1951 is as follows:

per	cent
Laundry and dry cleaning	30
Textiles	18
Sanitation and food processing	15
Industrial plant equipment	
and other maintenance	13
Synthetic rubber and military	11
Metal cleaning, plaster board,	
etc	6
Miscellaneous, other	7
TOTAL	100

There has been a revolution in marketing of household soaps in the last 25 or 30 years because in the early years in this century practically all sales for the household field were made through wholesale channels and from wholesalers to retailers and from retailers to consumers. The growth of chain stores and the development of cooperative purchasing organizations serving retail stores has changed this picture drastically. Many soap organizations employ a fairly comprehensive sales force for the areas in which they operate. Advertising and sales promotion are intensely competitive and aggressive. Sampling, couponing, one-cent sales, combination sales, contests, and premium offers are all used to promote sales by brands.

Magazines, newspapers; radio, television, farm papers, car cards, outdoor posters, etc., are used as advertising media carrying brand name advertising. Soap promotional work in schools, in home economic groups and through women's clubs are additional methods of brand promotion. Some people look at these activities and reason that soap could be sold cheaper if the advertising and sales promotion of the industry were eliminated. This is so pat and smooth that it sounds logical, but no greater fallacy ever existed.

We have seen the changes in the industry by type of product and the improvements made in the product, all with the end result of serving the consumer better. Growth in the industry by brands has been due to this one fundamental fact. The manufacturer has spent time and money to make a better product, and thus having made it he expects and hopes to capitalize by getting volume from the consumer on which he could make a profit. The way he gets volume is to make people aware of the product he has developed and he does this by advertising and by sales promotion. The brand name carries his reputation. He must develop it; must make it known; must create a desire for it.

In our type of economy, anyone can go into the soap business if he wishes to do so. If he thinks that he can produce a satisfactory product and sell it at a lower price than his competitors, he can attempt to do this. If he thinks he can produce a satisfactory product and eliminate all or part of the advertising and sales promotion expense, and still keep his volume up and his costs down, he is at liberty to make the attempt. There are some successful businesses in the soap industry operating on this basis today and there certainly is a place for such operation in the nature of things and under the laws of our land.

Particularly in the industrial field, where the number of customers may be relatively small and close personal contacts maintained, this type of business may flourish. On the other hand, if a manufacturer figures that he can profit best by the use of extensive advertising and sales promotion methods, he likewise is free to do so and rises and falls by the soundness of his operation. There is room in-

between for anyone who wants to do some of each.

I can recall many instances of manufacturers losing very large sums of money on one brand or another because somewhere along the line they have erred. There are many other cases of manufacturers spending large sums of money on products which initially showed losses but eventually sold huge volumes and made handsome profits. This is the nature of our set-up in this country and if by any means we change this- eliminate the gamble and try to get everything all nicely regulated and planned out-presumably to save the consumer moneygrowth in this industry and country will stop. We will have lost the thing that has made this country great. We will have lost the driving force which has impelled us to the top of the heap.

### Cleanliness Promotion

PERHAPS in no single direction does the soap industry, as an industry, do a better job or a more worthwhile job than in the general promotion of cleanliness. Cleanliness promotion is carried on under the name of "Cleanliness Bureau" of the Soap Association. This Bureau is engaged in educating people to the social and health benefits of being soap-andwater clean; in teaching them how to achieve cleanliness quickly and easily; and in reminding them of new or unusual ways in which cleanliness can

serve them in their daily lives.

It must be obvious that when this sort of educational work goes on, —and when these reminders cause soap to be used oftener and to be used in new ways—that this work must be helping in some degree towards improving the general standard of living.

Cleanliness in Schools: In discussing the need for and the benefit of cleanliness it was quickly apparent that the schools of the country offer an unusual opportunity to teach cleanliness practices. In line with this thought, the Association employed Elmo Roper to conduct a survey of the elementary schools in the State of Ohio to determine primarily the availability of cleanliness facilities, and secondly to learn something about teaching practices in respect to cleanliness.

Chart No. 8 shows some of the pertinent data from this survey. This has never been shown before and has not been fully studied by the Association. We have shown the answers to six of the questions in terms of the total sample and the breakdown by the groups based on town size. Without going into the details of the town size breakdown, this shows:

- 99 per cent of the schools have hand washing facilities.
- 2. 93 per cent of the schools do have soap, although 12 per cent show there is usually not enough to last throughout the day.
- 53 per cent of the schools use liquid soap, 35 per cent cake, and 7 per cent powdered soap.
- 3. 89 per cent of the schools have individual paper towels, 7 per cent roller paper towels and 3 per cent roller cotton towels.
- 4. 76 per cent of the schools have hot water.
- 5. The average number of pupils per wash basin is 46—but in this case we see a trend by town size as this averages 55 in towns of over 100,000 population, 46 in towns from 2500 to 100,000; and 41 in towns of 2500 or less, including rural areas.

We asked whether the teachers felt that hand washing facilities were adequate. Only 45 per cent of them felt that such was the case. This would indicate that a great many

(Turn to Page 113)

Chart 8

GEO STRUK FORTE

(Study of Cleanlinese Pacilities 5 Cleanlinese Education in Electric State of the S

				i Toma (K	
		Total Sample 206 = 100%	Over 100,000 pep. 64 • 100;	2, 20-100,000000. 50 -100:	Free 2,500 % in rural areas 32 = 1035
1)	Schools having handwashing facilities	29	100	100	29
3)	Schools turing soups				
	a) Total b) Decally Rough c) Not Bough	93 77 12	9h 31 3	73 36 4	92 92 23
	4) Edgedd c) Cales F) Product	53 35 7	19 73 3	10	62 23 3
3)	School's having townles				
	a) Individual paper'townly	89	95	76	91
	b) Roller paper	7	3	22	2.
	e) Beller cotton	3		*	4
4)	Schools having but unter	76			*
ŋ	Brorage Number of Popils per Sasin	iń pupilo	55 pupile	hé pupile	bl pupils
6)	Teachers reporting handwashing facilities are adequate	15	u	.00	leo

HROUGH its excellent filmforming characteristics CMC imparts to fabrics the same stiffening qualities which are commonly obtained with starch. The soil resistance and excellent washability previously described, combined with this stiffening quality, produce a fabric size which is unique in every sense.

Since film properties of CMC are known to be influenced by viscosity (a measure of molecular weight), a comparison of the stiffening properties of several types of CMC with starch was made by sizing 80 by 80-inch cotton cloth (4 oz./sq. yd.) in the Butterworth padder with various solutions of the sizes.

The sized fabrics were then ironed and rated for ease of ironing. The fabrics sized with CMC were rated as extremely easy to iron, producing a crisp, pleasant finish without excessive harshness. The sized materials were then evaluated for stiffness by means of the Gurley Stiffness Tester.

The sizing agents compared were CMC-low-viscosity type, medium-viscosity type, high-viscosity type, and thick-boiling cornstarch. Stiffness values obtained are shown in Figure 5 and are the arithmetic mean of warp and fill values. The results indicate that the degree of stiffness imparted to cloth by CMC increases with increasing viscosity type, with all three viscosity types of CMC tested exhibiting greater stiffening power than thick-boiling cornstarch as measured by this apparatus.

Although the greatest stiffening was obtained with high viscosity CMC, its high solution viscosity so limits the solids content that it becomes difficult to handle, particularly where bottling and transporting of the material is involved. Therefore, the medium viscosity type since it is an effective stiffener at relatively low add-ons affords optimum properties for this use.

The laboratory data shown above seemed to point to three general fields for sizing with CMC:

# CMC—An Aid to Washability

By J. G. Jarrell and H. B. Trost\*

Hercules Powder Co.

PART II

- (1) Light sizing for "closed circuit" laundry plants.
- (2) Light sizing for a fine finish where conventional starching is unsatisfactory.
- (3) Medium to heavy sizing such as shirt collars and cuffs at fairly high add-on levels where both the stiffening and washability qualities of a CMC finish can be utilized.

With these applications in mind, field trials were made to utilize the effects observed in laboratory work.

### Light Sizing For Washability

The most effective reduction to practice of the above laboratory data on CMC sizing has been the use of CMC as a sizing agent in linen supply houses. Here all the basic properties developed in laboratory studies have been effectively utilized in practice. The most complete evaluation of CMC as a sizing agent for commercial linens is being conducted at the American Institute of Laundering (AIL) in Joliet, Illinois.

Bar towels were chosen by the AIL for this work, since a heavy soil is encountered which requires a relatively expensive and time-consuming washing operation. The bar towels were also representative of a typical linen supply operation where all incoming material to be washed has been previously processed by the same laundry and would therefore be known to contain CMC.

After control values were established with the AIL standard washing formula for soil removal, whiteness retention, and tensile loss, all towels were sized with CMC for one month. A stock solution of about five percent CMC was poured into the washwheel during the final rinse in such quantities as to produce an addon of 0.075 percent CMC. At the end of the month, all the towels were assumed to be impregnated with CMC.

At this point, drastic reductions were made in the quantities of soap and bleach used; washing time was also reduced somewhat. No loss in washing efficiency was reported by the customers or the washroom operator as a result of these modifications.

Besides these tangible savings of time and washing materials, the AIL also noted that these modifications, accompanied by CMC sizing, considerably reduced the loss in tensile strength that normally occurs during laundering of the towels. This effect was determined by tensile strength measurements upon standard cotton test pieces which had been washed along with regular loads of bar towels. These tensile strength tests were further confirmed by cuprammonium fluidity measurements upon the test pieces. Cuprammonium fluidity is determined by dissolving cotton in cuprammonium solution and measuring the solution viscosity. It is a highly accurate index of the degradation that occurs in cotton as a result of laundering.

This work by the AIL is not yet complete. More is in progress and will be reported later.

In other commercial laundries, complete lines of linens, including tablecloths, napkins, butcher aprons, sheets, and pillowcases, have been

<sup>\*</sup> Presented before 38th mid-year meeting C.S.M.A., Boston, June 10, under the title "CMC-Unique Fabric Size."

sized with approximately 0.075 percent CMC (medium viscosity). The immediate results reported by the laundrymen have been ease of ironing, a neat finished appearance without harshness, and a very slight stiffening action. When used under a wide variety of soiling conditions, these sized linens resist soil somewhat, and, when returned to the laundry for washing, are cleaned to a high degree of whiteness with less soap, alkali, and, most important, less bleach. The results have been a greater volume of cleaning with less washing materials, and longer fabric life due to the reduced bleach consumption.

### Light Sizing For Improved Finish

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Many commercial laundries are faced with the problem of "no starch" shirts, which has arisen principally as a result of the popularity of the sport shirt. Customers often request that their sport shirts not be starched; this presents a finishing problem, since it is difficult to iron and finish a shirt without a small amount of size present. Shirts not starched also tend to become wrinkled and disheveled while being returned to customers. Sizing these shirts with a small amount of CMC (0.05 percent add-on) has en-

abled laundries to obtain a neat, finished appearance on sport shirts without a "starched" look or feel. This small amount of CMC also maintains a fine, finished appearance during the handling involved in returning shirts to the customer.

### Medium Sizing

Used in the home, the CMC solution produces the same high-quality finish observed in the laundry. The ease of washability eliminates extra rubbing of collars and cuffs and other heavily soiled spots (6).

The high-quality finish (as well as improved washability) obtained with CMC has also been noted in recent studies by the American Institute of Laundering in a program designed to evaluate the use of CMC in commercial laundries. When CMC was compared with starch in a collar and cuff starching machine on an equal cost basis, the press operators reported greater ease of ironing and less sticking to the presses. The presses also required considerably less cleaning with CMC-sized goods.

### Experimental

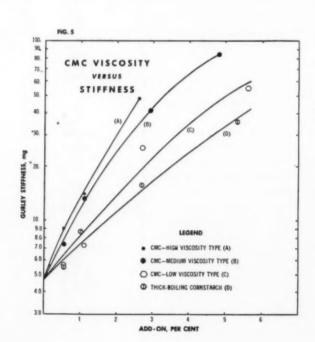
THE procedure employed in determining the enhanced soil resistance and rewashability properties realized with CMC-sized cotton fabrics over unsized fabric was patterned in principle after the techniques employed initially by the Institute of Textile Technology. The sizing and soiling operations were done on the Butterworth padder by a "dip and squeeze" technique.

### Materials

The basic sizing agent was medium-viscosity CMC having a viscosity of between 300 and 600 centipoises at two percent concentration in water. Prewashed, permanent-finish Indian Head cotton fabric with a thread count of 48 x 54 and a weight of 5.15 oz./sq. yd. was selected as the basic fabric. Aquadag, a colloidal dispersion of graphite (about 22 percent total solids) in water manufactured by the Acheson Colloids Corp. was used as the soil source. The variously sized and soiled pieces of cotton fabric were washed in a 0.25 percent concentration of an alkaline-built alkyl benzenesulfonate detergent powder consisting of 20 percent active ingredient, 50 percent sodium tripolyphosphate (Na5P3O10) and 30 percent sodium sulfate. The specific concentration and this detergent powder were chosen because it was believed that the concentration as well as the formula was typical of homeuse conditions.

The soil-resistance properties of the variously sized as well as unsized fabrics were judged by the respective percent apparent reflectance levels to which these fabrics soiled. The washability or "ease of washing" characteristics were indicated by the apparent reflectance after washing the sized or unsized soiled swatches in the indicated detergent. All reflectance measurements were made on the Hunter reflectometer with the green filter. The swatches of test cloth were laid on a turn-table of matching background and an integrated reading was obtained under glass at a speed of 78 r.p.m. (7).

In all the phases of this work it was necessary to run unsized and CMC-sized controls in conjunction with every test because of the normal



variations encountered in fabric impregnations. Because of this factor, interphase comparisons must be made keeping in mind the CMC and unsized cloth control values in each case.

### Method

Eight strips of permanentfinish Indian Head cotton fabric, approximately 10 yards in length and four inches wide, being enough cloth for about 16 tests, were washed with an alkaline-built alkyl benzenesulfonate powder in an automatic washer, hung up, and allowed to dry overnight in a constant-temperature—humidity room. This cloth was cut into strips four inches by 15 feet in length for the sizing operation. The cloth was sized in a single pass through the Butterworth padder by two-roll impregnation with 38 pounds pressure on the rolls, the cloth picking up approximately 80 percent of its weight in solution. The fabric was weighed before and after sizing (wet). The percent add-on was calculated from the concentration of the sizing solution and the amount of solution picked up by the cloth, by the following formula:

With medium-viscosity CMC it was found that solutions of 0.125 percent and 1.25 percent concentration would give close to 0.1 percent and 1.0 percent add-on, respectively. A volume of 800 ml. of solution was found adequate for sizing the 15 feet of cloth.

Six feet of the sized fabric was left unsoiled to be washed with the soiled sized material for measuring the soil suspension (per cent whiteness retention) characteristics of a specific system. The remaining nine feet of sized cloth was divided equally for soiling. The cloth was soiled by a single pass through the water-base soil contained in the Butterworth padder under the same roll pressure as used in the sizing procedure. The soiling batch con-

tained 22 grams of Aquadag (22 percent graphite in water, Acheson Colloids Corp.) which had been diluted with one gallon of water. A fresh solution was used for each different fabric sizing when soiling in the water-base soil, as possible contamination of the soil might occur with the watersoluble sizes.

After the cloth was soiled and allowed to air-dry for at least 24 hours, twelve three by four inch swatches were cut from the strip of cloth, and the percent apparent reflectance was obtained by means of the Hunter reflectometer. These readings were used to evaluate soil resistance.

Washing of the sized, soiled cloth was done in the Terg-O-Tometer (U. S. Testing Company) where 12 sized, soiled swatches in conjunction with 12 sized, unsoiled swatches comprised the wash load. These swatches were washed in a liter of 0.25 percent solution of the alkaline-built anionic detergent cited earlier for 10 minutes at 110°F. in distilled water, rinsed, and dried; then reflectances were obtained. The washability or ease of

DW equals Dry cloth weight (before sizing)

C equals Solution concentration in % AO equals Solids added to fabric in % (% add-on)

washing properties are indicated by the reflectance of the soiled fabrics after washing.

The reflectance of the unsoiled, sized or unsized, washed cloth was compared with the original white cloth for whiteness retention, where whiteness retention is equal to the washed reflectance divided by the initial reflectance expressed as percent.

### Summary

THIS article presents a case history of reducing to actual practice the unique fabric sizing properties of CMC first observed in the laboratory. Laboratory data are presented which indicate that cotton sized with

(Turn to Page 163)

# Synthetic Detergents up

By John W. McCutcheon

Part II

A food emu

Class and Formula

Manufacturer

Trade Name

Cleary Corp.

W. A.

arrate G

Polyoxyethylene monostearate

SOAP and SANITARY CHEMICALS

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Туре	Remarks
Clearate G	W. A. Cleary Corp.	Polyoxyethylene monostearate	Emulsifier	Solid	100%	nonionic	A food emulsifier.
Clearex	Miranol Chemical Co.	Sulfonated fatty acid amide	Detergent	Paste	25%	cnionic	A shampoo base material.
Chlorsol	E. F. Drew & Co.	Polyoxyalkylene ester	Emulsifier	Liquid		nonionic	A chlordane emulsitier. See also Emcol H-72 for same purpose.
Cominol	Commonwealth Color & Chem. Co.	Salt of a sulfonated fatty amide	Detergent		30%	anionic	A refined form of Soapotol.
Compound 8-S	E. I. du Pont de Nemours & Co.	Sod. salt of a condensed alkyl sulfonic acid	Dispersant	Liquid		anionic	A textile dispersant for vat dyes.
Creolite-NC	Perkins Soap Co.	Compound of surface active agent in a 20% cresylic acid base	Wetting	Liquid		anionic	Textile,
Cyclopon A Extra							See Igepon-TN-71.
D-Spers-O	Planetary Chem. Co.	Condensation product of a polyglycol, fatty acid and sod, sulfosuccinic acid	Emulsifier	Liquid	100%	nonionic	An emulsitier for DDT, and other chlorinated insoc- ticides.
D-Spers-O-AC	Planetary Chem. Co.	Condensation product of a polyglycol, fatty acid and sod, sulfosuccinic acid	Emulsifier	Liquid	100%	nonionic	More acid and hard water resistant than D-Spers-O. Use: Agricultural sprays for chlordane, etc.
D-Spers-W D-Spers-PS D-Spers-MO D-Spers-CI	Planetary Chem. Co.	Condensation product of $\alpha$ polyglycol, fatty acid and sod, sulfosuccinic acid	Emulsifier	Liquid	100%	nonionic	A series of emulsitiers of varying solubility proper- ties. W is water soluble, PS petroleum solven soluble. MO, mineral oil sol. Cl-chlorinated sol vent soluble. Insecticide sprays, dry cleaning, etc.
Darvon No. 1	R. T. Vanderbilt Co. (Míg. by Dewey & Almy)	Sod. salt of polymerized alkyl aryl sulfonic acid (alkyl, short chain) (probably a formaldehyde condensation)	Dispersing	Powder	100%	anionic	Soluble in water up to 40%, pH of 1% sol. 7-9.5. Uses: Dispersant for latex, carbon black, whiting, clay, etc. Compare also Daxad No. 11.
Darvan No. 2	R. T. Vonderbilt Co. (Mfg. by Dewey & Almy)	Sod. salt of polymerized alkyl aryl sulfonic acid (alkyl,-long chain)	Dispersing	Powder	100%	anionic	Max. water solubility — 25%. An emulsion stabilizer. Dispersant for latex, paper, leather. Particularly for zinc oxide, titanium dioxide, sulfur, etc.
Dexad No. 11	Dewey & Almy Chem. Co.	Polymerized sod, salts of alkyl naphthalene sulfonic acid (alkyl, short chain)	Dispersing	Powder	77%	anionic	Maximum solubility in water in 40%. Oil in water emulsifier. Dispersing agent for latex, paper, leather, etc. Compare also Darvan No. 1.
Daxad No. 21	Dewey & Almy Chem. Co.	Mono calcium salt of a polymerized alkyl aryl sulfonic acid (alkyl, long chain)	Dispersing	Powder	75%	anionic	Water solubility approx. 25% at 70°F. Insoluble in mineral oils, alcohol, kerosene, etc. Dispersant for solids in water, as calcium salts in mfg. of wallboard, etc.
Daxad No. 23	Dewey & Almy Chem. Co.	Polymerized sod. salts of substituted benzoid alkyl sulfanic acid (alkyl-lang chain)	Dispersant	Powder	85%	anionic	Water soluble. An emulsion stabilizer against acids, alkalis and temperature change. Dispersant for paper, textile and mining industry. Compare also with Darvan No. 2.
Daxad No. 27	Dewey & Almy Chem. Co.	Polymerized sod, salt of a substituted benzoid alkyl sulfonic acid combined with an inert inorganic suspending agent	Dispersing	Powder	%88	anionic	Uses: Dispersant and emulsitier for agricultural sprays.
Decab	Fairfield Labs., Inc.	Octadecenyl — 9, dimethyl benzyl, ammonium chloride (Mol. Wt. 417)	Germicide	Liquid	%66	cationic	Similar to Octab. Alkyl group derived from oleic acid. Water and benzene soluble, phenol coeff. at 37°C. against S.A. 175.200. Uses: algicide, decdorant, sanitizer, etc.
Decersol Of	American Cyanamid Co.	Dioctyl ester of sodium sulfo succinic acid	Wetting	Liquid	25%	anionic	Name used in textile trade for Aerosol, See Aerosol OT, 25% agueous.
Democon W-100 Democon W-600	Demo Laboratories	A blend of several nonionic base materials	Detergent	Liquid	100%	nonionic	A general household cleaner. Democon W-600 is a built powder containing 35% active quaternary ammonium sait.
Dergon OM	Arkansas Co.	Amino faity acid ester	Detergent Wetting	Liquid	%56	nonionic	Textile, leather, scouring wool, synthetic fibers, shearlings.
Dergon MF	Arkansas Co.	An alkoxypolyglycol fatty acid ester	Detergent	Liquid	%06	nonionic	Textile: scouring wool and synthetic fibers; low foaming type.

Trade Name	Manufacturer	Close and Formula	Main Uses	Form ?	% Conc.	Type	Remarks
Dergon T	Arkonsos Co.	A built detergent from a fatty acid ester sulfate	Detergent	Liquid	%09	anionic	A textile scouring agent for wool and acetates.
Dergopen PX	Arkansas Co.	Alkoxypolyglycol fatty acid ester	Wetting	Liquid	20%	nonionic	A textile wetting agent for use with cationics.
Dermolate	White Laboratories, Inc.	High molecular wt. sat. fatty acids et al	Detergent	Solid		amionic	A non irritating hypo-allergenic lathering skin detergent in cake form.
Detamol A	Commonwealth Color & Chem. Co.	Sod, salt of an alkyl sulfonate	Detergent		18%	anionic	Textile.
Detergent D-40 Detergent D-40-SF Detergent D-60-FG	Oronite Chemical Co.	Alkyl aryl sodium sulfonate	Detergent Wetting	Granular	40%	anionic	General industrial and household eleaning agents.  Drum dried detergents of light color, bland odor, and possessing high surface activity in acidic or alkaline solutions, and in soft or hard water. D40.5F is in flake form, D40.FG, powder form.  D-60 is 56%, granular form.
Detengent-D Detengent-G	Joseph Turner & Co.	Dodecylbenzene sod. sulfonate	Detengent	Flake	40%	anionic	Detergent for general industrial use. Detergent-G is the same in powder form.
Detergent-M Detergent-D	Ciba Co.	Amino condensation product	Detergent	Solid	10%	anionic	Water soluble, pH of 1% solution at $25^{\circ}C8.5$ (-D) is similar only in more concentrated form.
Detengent MXP	Monsanto Chemical Co.	A built powder containing Sterox CD	Detengent	Powder		nonionic	A compounded non sudsting detergent. Stable to strong alkall. Uses: intermediate, textiles. Indus- trial cleaning.
Detergent Sanitizer Conc.	Onyx Oil & Chem. Co.	Mixture of BTC-100% and Neutronyx 600, Ratio 1:2 and 1:1	Germicide	Liquid	100%	cationic	Product contains cattonic germicide with nonionic wetting agent. Use: Sanitizing detergent.
Detergent Slurry	Oronite Chemical Co.	Alkyl aryl sodium sulfonate	Detergent	Slurry	42%	anionic	A slurry for spray or drum drying purposes.
Detergent-77	Peck's Products Co.		Detergent	Liquid		nonionic	General household and industrial cleaner.
Detergent-80	Peck's Products Co.	An alkanolamine condensate	Detergent	Liquid	20%	nonionic	An industrial cleaner.
Detergent T-12	Victor Chem. Works	Nonionic organic phosphate plus inor- ganic phosphate builder	Detergent	Powder		nonionic	Non foaming for automatic machines.
Detergent W-1653	Jacques Wolf & Co.	A fatty acid amine condensate	Wetting	Liquid	100%	nonionic	A textile scouring and dyeing assistant.
Detergol 1426	L. Sonneborn Sons, Inc.		Detergent	Liquid	100%		MINIOUS
Detersol	Standard Chem. Prod. Inc.	A built syndet-soap	Detergent	Paste		anionic	A textile product for boiling off operations.
Dianol ANC	Quaker Chem. Prod. Corp.	Alkyl cryl sulfonate	Detergent Wetting	Liquid	30%	anionic	Textile uses.
Diamol ANS	Quaker Chem. Prod. Corp.	Alkyl aryl sulfonate	Detergent Wetting	Poste	43%	anionic	Textile uses.
Dianol N	Quaker Chem. Prod. Corp.	Fatty amide sulfate	Detergent	Liquid	30%	anionic	Neutral detergent for textile and general uses.
Dianol S	Quaker Chem. Prod. Corp.	Fatty amide sulfate	Detergent	Paste	24%	anionic	Textile and general industrial detergents.
Dianol G	Quaker Chem. Prod. Corp.	Fatty amide condensate	Detergent Wetting	Liquid	%86	nonionic	Industrial cleaning agent.
Dianol 11	Quaker Chem. Prod. Corp.	Alkyl aryl sulfonate	Wetting	Liquid	45%	cmionic	Textile uses.
Diomol 20	Quaker Chem. Prod. Corp.	Ester sulfate	Wetting	Liquid	65%	anionic	Textile uses.
Dianol 50	Quaker Chem. Prod. Corp.	An alkyl naphthalene sod, sulfonate	Wetting Dispersing	Liquid	30%	anionic	A textile wetting agent, stable to acid alkali and oxidizing agents for chrome dyeing, peroxide bleaching, kier boiling, etc.
Diazapon AN	Antara Chemicals Div. General Dyestuff Corp.		Dispersont Wetting	Liquid	33%	nonionic	Primary use to stabilize diazonium compounds in naphthol dyeing process.
Dichloran	Fine Organics, Inc.	Alkyl dimethyl dichlorobenzyl ammonium chloride	Germicide	Liquid	20%	cationic	Bactericide and sanitizing agent.

Trade Mame	Manufacturer	Closs and Formula	Main Uses	Form	% Conc.	Type	Remarks
Diglycol-laurate Diglycol-oleate Diglycol-stearate	Glyco Products Co. Kessler Chem. Co. etc.	As named	Emulsifier		100%	nonionic	Laurate, water insoluble; stearate, is water dispersible. Uses: General water in all emulsifier for cosmettes, foods, etc.
Dispersont M-8596	Oronite Chemical Co.	Condensation product of ethylene oxide and an alkyl phenol	Detengent Wetting	Liquid	85%	nonionic	Water soluble. A low sudsing detergent especially for use in laundries and in automatic washing machines.
Dispersant NI-8593	Oronite Chemical Co.	Condensation product of ethylene oxide and an alkyl phenol	Emulsifier Detergent	Liquid	100%	nonionic	Oil soluble, Water in oil emulsifier. Uses: dry cleaning detergent, etc.
Dreft (retail)	Procter & Gamble Co.		Detergent	Granules		anionic	Dishes and fine fabrics.
Drene (retail)	Procter & Gamble Co.	0	Detengent	Liquid		anionic	Hair shampoo.
Duofol L	Hart Products Corp.	Highly sulfonated ester	Penetrant Wetting	Liquid	%09	anionic	pH of 1% soln. at 25°C 6.5. Drave's sinking time 0.1% soln. — 15 sec. Uses: Textiles, wetting out, sanforizing,
Duponol C	E. I. du Pont de Nemours & Co.	Sod. lauryl sulfate	Detergent	Powder		anionic	Meets specification of U.S.P. XIV.
Duponol D Paste	E. I. du Pont de Nemours & Co.	Mixed alcohol sodium sulfate	Detergent	Paste		anionic	A paste for general heavy duty detergent use.
Duponol G	E. I. du Pont de Nemours & Co.	Fatty alcohol amine sulfate	Emulsifying	Poste		anionic	Oil soluble emulsifying agent.
Duponol L-144-WDG	E. I. du Pont de Nemours & Co.	Fatty alcohol sodium sulfate	Emulsifier	Liquid		anionic	An emulsifier for dry cleaning use and for fungicidal sprays.
Duponol LS Paste Duponol LS Flake	E. I. du Pont de Nemours & Co.	Technical oleyl sodium sulfate	Detergent	Paste		anionic	Scouring agent, Comes also in flake form, Duponol LS Flakes.
Duponol ME Dry	E. I. du Pont de Nemours & Co.	Technical laury! sodium sulfate	Detergent Dispersing Emulsifying	Powder		anionic	Wetting properties very efficient. Detergency excellent. Minimum electrolyte.
Duponol OS	E. I. du Pont de Nemours & Co.	Fatty alcohol amine sulfate composition	Emulsifying	Liquid			Emulsifying agent for O/W emulsions.
Duponol SN	E. I. du Pont de Nemours & Co.	Fatty alcohol sodium sulfate	Detergent	Liquid		anionic	A shampoo base.
Duponol ST	E. I. du Pont de Nemours & Co.	Fatty alcohol triethanolamine sulfate	Detergent	Liquid		anionic	A shampoo base.
Duponol WA Paste Duponol WA Flakes	E. I. du Pont de Nemours & Co.	Technical laury! sodium sulfate	Detergent Wetting Dispersing	Paste		anionic	More water-soluble than Duponol D and lathers better in cold water. Duponol WA Flakes are same in flake form.
Duponol WAQ	E. I. du Pont de Nemours & Co.	Technical lauryl sodium sulfate	Detergent	Paste		anionic	Fluid paste designed for shampoos.
Duponol WAT	E. I. du Pont de Nemours & Co.	Fatty alcohol triethanolamine sulfate	Detergent	Liquid		anionic	Similar to Duponol WA except neutralized with triethanolamine. Uses: cosmetics, shampoos.
Duponol WS	E. I. du Pont de Nemours & Co.	Fatty alcohol amine sulfate composition	Emulsifying	Wax		anionic	Emulsifying agent.
Duponol 80	E. I. du Pont de Nemours & Co.	Octyl alcohol sodium sulfate	Emulsifying Dispersant	Liquid		anionic	Very soluble. Used in electroplating baths, tanning of leather, textiles, etc.
Dynesol F 20	Amalgamated Chem. Corp.	Sulfonated poly ester of an aliphatic alcohol	Wetting	Liquid	20%	anionic	Use: Textiles for weiting and reweiting operations.
Dynesol K-50 Dynesol R-50	Amalgamated Chemical Corp.	Sodium scalt of sulfonated mono and di canyl naphthalene	Penetrant	Liquid	35%	anionic	Oil in water emulsifier. Textiles. Dynesol R-50 is a 50% sol. of an alkyl aryl sulfancie of less welting, but greater foaming ability than the K-50. In paste form, it is used as a textile scouring aid.
E-607	Emulsol Corp.	Quaternary ammonium compound	Germicide	Powder	100%	cationic	The active ingredient in Emulsept and sold to manufacturers only.
Emargol	Emulsol Corp.	Fatty acid ester	Emulsifier			nonionic	An anti spattering agent for margarine, shortening, etc.
Emcol 14	Emulsol Corp.	Polyglyceride ester of a fatty acid	Emulsifier			nonionic	An antiforming agent for baking, etc.
Emcol 888	Emulsol Corp.	Polyalkylnophthalene methyl pyridinium chloride	Germicide	Liquid	40%		For use in sanitizing solutions. Phenol coeff. against S.A. at 20°C. 790.

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Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Туре	Remarks
Emcol 4150	Emulsol Corp.	Complex fatty acid derivative of aliphatic sulfonate	Detergent Wetting	Liquid	35%	anionic	Completely water soluble. For cosmetics, textiles.
Emcol 5100	Emulsol Corp.	Alkanolamine fatty acid condensate	Detergent Wetting	Liquid	%06	nonionic	Solution becomes viscous with addition of water. Thickening agent, emulsifier, etc.
Emcol H-47	Emulsol Corp.	Fatty acid condensation product of a polyhydric alcohol	Emulsifier	Liquid	%001	nonionic	An oil in water emulsifier for agricultural sprays, particularly for DDT. Recommended conc. 5%. Soluble in benzene, xylene, turpentine. Insoluble in white mineral oil, kerosene.
Emcol H-50A	Emulsol Corp.	Fatty acid condensation product of a polyhydric alcohol	Emulsifier	Liquid	100%	nonionic	An oil in water emulsifier embracing the solubility of both Emcol H-47 and Emcol H-50. Also for DDT sprays in aliphatic solvents
Emcol H-54	Emulsol Corp.	Fatty acid condensation product of polyhydric alcohols	Emulsifier	Liquid		nonionic	Emulsifier for mineral oils.
Emcol H-65A	Emulsol Corp.	Fatty acid condensation product of a polyhydric alcohol	Emulatier	Liquid		anionic	Designed to give a 2% oil in water emulsion of chlordane with 2% conc. of the emulsifier.
Emcol H-72 Emcol H-74	Emulsol Corp.	Fatty acid condensation product of a polyhydric alcohol	Emulsifier	Liquid		nonionic	An O/W emulsitier designed for chlordane. Mix 45 parts of chlordane in 45 parts of kerosene, clear and add 10 parts of Emod H-72. Ditule with water as desired. Emod H-74 is an O/W emulsitier for concentrates containing 8 to 10 lbs. of chlordane per gall.
Emcol H-77	Emulsol Corp.	Blend of polyalcohol carboxylic acid esters and sulfonated oils	Emulsifier	Liquid		amionic	For the formulation of $\alpha$ wide range of agricultural emulsifiable concentrates.
Emcol K-8300	Emulsol Corp.	Complex aliphatic sulfonate	Emulsifier Stabilizer	Liquid	35%	anionic	Emulsifier for the preparation of latices, for use in synthetic latices and other polymer emulsions.
Emcol-MS Emcol-MST	Emulsol Corp.	Glycerol monostearate	Emulsifier	Solid	100%	nonionic	Emulsifier for foods, e.g., margarine, etc. See also Tegin, Aldo 33, S-1079. Glycerol monostearate from hardened oils is Emcol MST.
Emcol RDC-D	Emulsol Corp.	Diethylene glycol laurate	Emulsifier	Liquid	100%	nonionic	Surface tension of 0.1% sol. 31 dynes/cm.
Emcol RGL	Emulsol Corp.	Mono and diglycerol esters of fatty acids	Emulsifier	Paste		nonionic	An emulsifier in plastic form for use in cake mixes, etc.
Emcol RH Emcol RHT	Emulsol Corp.	Blend of mono and diglycerides of fatty acids	Emulsifier	Solid	100%	nonionic	Edible. Used in food, cosmetic and pharmaceutical preparations.
Emulphor EL-620	Antara Chemicals Div. General Dyestuff Corp.	Polyoxyethylated vegetable oil	Emulsifier Dispersant	Liquid	100%	nonionic	Soluble in water, ethanol, xylene, butyl Cellosolve' Carbon tetrachloride. Homologue of Emulphor EL-719. Uses: Developed specifically for application with insecticides and weed killers.
Emulphor EL-719	Aniara Chemicals Div. General Dyestuff Corp.	Polyoxyethylated vegetable oil	Emulsifier Dispersant	Liquid	%/6	nonionic	Water soluble, mineral oil insoluble, emulsifier for animal and vegetable fats and oils. Uses: Paint and wax emulsifier, lime soap dispersant, leather. Formerly Antarox B.290.
Emulphor VK-730	Antara Chemicals Div. General Dyestuff Corp.	Polyoxyethylated tall oil	Detergent Emulsitier Dispersant	Liquid	100%	nonionic	Soluble in water, parily soluble in toluene, insoluble in mineral oil. Acid and alkali stable. Line soap dispersant — when built with mild alkalies produces a mod, foaming hard surface detergent.
Emulphor VN-430	Antara Chemicals Div. General Dyestuff Corp.	Polyoxyethylated fatty acid	Emulsifier	Liquid	100%	nonionic	Water dispersible, soluble in mineral oil, benzene, kerosene. Uses: Lubricant additive, cosmetics, dry cleaning, textiles. Formerly Antarox B-100.
Emulphor ON-870	Antara Chemicals Div. General Dyestuff Corp.	Polyoxyethylated fatty alcohol	Emulsifier	Paste	100%	100% nonionic	Soluble in water, benzene, vegetable oil. Insoluble in kerosene. Emulsitier for waxes, rubber and paint latices, leather oils and acid degreasing of wool. Formerly Antarox D-100.

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Type	Remarks
Emulphor VT-679	Aniara Chemicals Div. General Dyestuff Corp.	Polyoxyethylated tatty acid	Emulsifier	Wax	%26	nonionic	Can be combined with lecithin as an extender for this spreading agent in the coating of baking pans and other applications. Solubilizer or emulsitier for certain types of oils used in pharmaceuticals, cosmetics etc. Acts as a defoaming agent. Formerly Antarox B-390.
Emulsept	Emulsol Corp.	CH4(CH2),COOCH2CH2NHCCH3N-CI	Gérmicide Detergent	Liquid	10%	cationic	A cationic germicide with some detergent proper- ties. The 100% active material sold to manufac- turers only is E607 which see.
Emulsept 2X	Emulsol Corp.	Same as Emulsept	Germicide	Liquid	20%	cationic	Double strength Emulsept. Sold to manufacturers only.
Emulside 680B	Van Dyk & Co.	Polymerized higher glycol fatty acid ester	Emulsifier	Liquid	100%	nonionic	An oil in water emulsifier for agricultural sprays with DDT, chlordone, etc. Soluble in kerosene. Insoluble in water.
Emulsifier G- 21 Emulsifier G- 61 Emulsifier G-261 Emulsifier G-861	Kessler Chemical Co.	A blend of mono and diglycerides	Emulsifier	Paste	100%	nonionic	Edible emulsifiers varying in plastic properties, for bakery products. G-861 is a flake.
Emulsifier H Emulsifier R Emulsifier L Emulsifier M	Monsanto Chemical Co.	Blended surface active agents	Emulsifier	Paste & Liquid		nonionic	A series of emulsifiers for insecticides and herbi- cides, Emulsifiers H ar R are designed for use with pentachlorophenol (Santophen 20). With chlordane in kerosene etc. use L or M.
Emulsifier L-32 Emulsifier L-34 Emulsifier L-45B	Jacques Wolf & Co.	Fatty acid ester of higher poly alcohols	Emulsifier	Liquid	100%	nonionic	An oil in water emulsitier for vegetable, animal and mineral oils. L-32 has good solubility in organic solvents and above oils.
Emulsifier L-34A Emulsifier L-45	Jacques Wolf & Co.	Fatty acid ester of higher poly alcohols	Emulsifier	Liquid	%96	nonionic	A degreasing agent with kerosene in leather industry. The L45 compound is 85% active and contains 15% water.
Emulsifier O-205	Jacques Wolf & Co.	Fatty acid ester of higher poly alcohols	Emulsifier Dispersant	Liquid	100%	nonionic	Moderately soluble in water or kerosene. Not acid or alkali stable, Uses: mineral, vegetable or animal oil emulsitier; degreasing or lubricating agent.
Emulsifier P-8610	Kessler Chemical Co.	Polyhydric alcohol ester of edible saturated fatty acids	Emulsifier	Flakes	100%	anionic	Use: as emulsifier in cosmetics and edible products.
Emulsifier X-15	Kessler Chemical Co.	A fatty acid ester	Emulsifier	Liquid	100%	nonionic	An emulsifier for aliphatic and aromatic solvents for use in textiles, leather, insecticides.
Emulsifier 2 Emulsifier 3 Emulsifier M-O-1	Kessler Chemical Co.	Polyglycol esters of fatty acids	Emulsifier	Liquid, S	Liquid, Solid 100%	nonionic	Emulsitiers 2 and 3 are oil in water type, soluble in aliphatic and aromatic solvents for degreasing compounds, agricultural sprays, etc. Emulsitiers 3 and Mo-1 are esters of unsaturated acids. Emulsitier MO-1 is soluble in aliphatic solvents and used in leather softening, textile lubrication, etc.
Emulsifier 610.A	Van Dyk & Co.	Polymerized higher glycol fatty acid ester	Emulsifier Dispersant	Liquid	100%	nonionic	Water soluble, insoluble in mineral oil. Uses: dispersion of pigments, cosmetic emulsitier, etc.
Energetic	Armour & Co.	Polyoxyethylene ester of fatty acids	Detergent Wetting	Liquid	%06	nonionie	A low sudsing detergent of the Sterox. Ethofot, G-1226 and Nonic 218 type. Uses: laundry work, etc.
Erkolin	Advance Solverits & Chem. Corp.	Alkyl aryl sod, sulfonate	Wetting	Powder		anionic	Agricultural sprays. Paint.
Ethofat	A:mour & Co.	Fatty and rosin acids condensed with ethylene oxide	Detergent Wetting Emulsifying	Solid Liquid Paste	100%	nonionic	A series of compounds from various fat sources, e.g. Ehofat HFO from hardened fish oil, etc. Represent a wide range of uses from industrial nonionic detergents to latex dispersants.

Trade Mame	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Type	Remarks
Ethomeen	Armour & Co.	Tertiony amines	Detergent	Solid Liquid Poste	100%	cationic	A wide series of compounds with variation in both faity acid and degree of ethylene oxide substitution. Cationic properties vary between members. Stable to acids and alkalis. Like the Ethoristic, code letters represent types of fat used. Thus Ethomeen T is a product from tallow fatty acids. Ethomeen C from occonut fatty acids, etc.
Ethornid	Armour & Co.	An ethylene oxide condensation product of an amide	Detergent Wetting Dispersing	Liquid Paste Solid	100%	nonionic	More acid and alkali stable than the Ethofats and less so than the Ethomeens. A series of products as for Ethomeens, and Ethofats. Best detergent of group is Ethomid RO (Red Oil).
Ethyl Cetab	Fairfield Labs., Inc.	Cetyl dimethyl ethyl ommonium bromide	Germicide	Powder	%001	cationic	Water soluble up to 25% if solvent assisted. Pharmaceutical product.
Ethyl Decab	Fairfield Labs., Inc.	Octodecenyl-9, dimethyl ethyl ammonium bromide	Bactericide	Liquid	100%	cationic	Same as Octimet, only oleic is substituted for stearic. Algicide and slime preventive.
Eumercin LR	Warwick Chemical Co.	A sulfated branched chain alcohol	Wetting	Liquid	40%	anionic	A wetting and foaming agent in the presence of high electrolyte, Textiles, in flame proding of.
Eumorcin NB	Warwick Chemical Co.	A phosphorated complex alcohol	Wetting	Liquid	20%	anionic	A weiting agent in moderate alkali solutions. Use: Textiles, bottle washing.
Evenate SX	Amalgamated Chem. Corp.	A nonionic condensate combined with a glyceride	Dispersant	Paste	20%	nonionic	In textiles as a dye dispersant, particularly for nylon and acetate yarns.
Fab (retail)	Colgate-Palmolive-Peet Co.	An alkyl aryl sod, sulfonate plus builders	Detergent	Powder		anionic	A heavy duty cleanser. See also Tide, Suri, etc.
Felso (retail)	Fels & Co.	A built sod. alkyl aryl sulfonate	Detergent	Beads		anionic	A heavy duty general household detergent.
Foamole-G	Van Dyk & Co.	Fatty alcohol and amide sulfates and sulfonates	Detergent Wetting	Liquid	20%	anionic	A mixed synthetic sultable for shampoos.
G-1425 G-1441 G-1493	Alias Powder Co.	Polyoxyeihylene sorbitol lanolin reaction products	Emulsifier	Paste	100%	nonionic	Materials similar to lanolin in appearance and feel, yet having entirely different solubility characteristics. For cosmetic use, G-1425 is water dispersible, G-1441 is water soluble & G-1483 is o' soluble.
G-1702 G-1704 G-1706 G-1725 G-1725 G-1727 G-1734	Allas Powder Co.	Polyoxyeitylene sorbitol beeswax derivatives	Emulsifier	Solid	100%	nonionic	The series G-1702-4-6 are oil-dispersible. G-1725, 1726, 1727 and 1734 are water-dispersible. For cosmettc use — For preparation of O/W cold creams.containing no scap. Also used in O/W cometics.
G-2162	Atlas Powder Co.	Polyoxyethylene propylene glycol monostearate	Emulsifier	Paste	100%	nonionic	Water soluble-general emulsifier — used with MYBI 52 in anti-perspirant creams.
G-2800	Atlas Powder Co.	Polyoxypropylene mannitol diolecte	Emulsifier	Liquid	100%	nonionic	Oil soluble — used as vitamin oil emulsifier.
G-9446N	Atlas Powder Co.	Polyoxyethylene sorbitan monooleate	Emulsifier	Liquid	100%	nonionic	Similar to Tween 80 — Shorter polyoxyethylene chain length.
Germ-4-tol	Fine Organics, Inc.	Dimethyl benzyl lauryl ammonium chloride	Germicide	Liquid	20%	cationic	A sanitizer. Suggested concentration, 200 PPM. See also Rodaton. Also supplied in a 97-100% active solid. Phenol Coeff, against S.A. at 20°C-300 at 37°C-407.
Giant (retail)	Armour &Co.	Nonionic plus inorganic salts	Detergent	Beads		nonionic	A light duty household detergent.
Glim (retail)	B. T. Babbitt, Inc.	An ethylene oxide condensation product of an alkyl phenol	Detergent	Liquid	83%	nonionic	A liquid dishwashing and general household de- tergent. Base material manufactured by General Aniline & Film Corp.

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Туро	Remarks
Glycerol Monolaurate Oleate Stearate Ricinoleate, etc.	Glyco Products, Alrose Chemical Co. Kessler Chemical Co. Carilisle Chemical Co. Garilisle Chemical Co. Goldschmidt Chem. Co., etc.	As named	Emulsifier	Liquid Paste Solid	100%	nonionic	Emulsifiers of this type also frequently occur under trade names as Aldo 33, Tegin 515, etc.
Glycol Esters	Carlisle Chem. Wks. Glyco Products Kessler Chem. Co. etc.	As named	Emulsifiers	Liquid Solid Paste	100%	nonionic	A wide range of emulsitiers occur as glycol con- densates useful in agricultural sprays, cosmetics, food products, etc.
Gobs-O-Suds (retail)	Chemical Manufacturing & Dis- tributing Co.	Alkyl aryl sod, sulfonate	Detengent	Solid		anionic	A retail household detergent of the Swerl, Tide, Fab type.
Good-Rite	B. F. Goodrich Chem. Co.	N-dodecyl B alonine C19H36NHCH3CH3COOH	Emulsifier Detergent	Powder		cationic	See Medialan A (German) for nearest type product.
Goremul A	Glyco Products Co.	Polyhydric alcohol ether fatty acid condensate	Emulsifying Dispersant	Solid	100%	nonionic	$W\alpha x$ solid. Formerly named Emulgor A. Water dispersible. An emulsifier in the presence of acids, salts, etc.
Halo (retail)	Colgate-Palmolive-Peet Co.	Sulfate of mixed fatty acid monoglyceride. Possibly the ammonium salt.	Detergent	Liquid		anionic	Shampoo,
Hartofol C	Hart Products Corp.	Alkyl aryl sod, sulfonate	Emulsifier Wetting	Liquid		anionic	Viscous liquid. Soluble in warm water. Use: Textiles.
Hartopon B	Hart Products Corp.	Modified alcohol sulfate	Detergent	Paste		anionic	Textile scouring agent.
HT-70	Fine Organics, Inc.	Higher alkenyl dimethyl ethyl ammonium bromide	Germicide	Solid	%02	cationic	Composition, 70% quaternary ammonium salt and 30% sod, carbonate. Use: in water treatment for slime removal, etc.
Hum (retail)	Theobald Industries	A built alkyl aryl sod. sulfonate	Detergent	Powder		anionic	A household detergent of class of Tide, Fab, Surf, etc.
Hyamine 1622	Rohm & Haas Co.	Disobulyl phenoxy ethoxy ethyl dimethyl benzyl ammonium chloride	Germicide	Oryst.		cationic	Disinfectant and sanitizer in restaurant and phormaceutical fields. Oher applications-pigment dispersions, oil flotation, textile treatment (where they are substantive to cellulose), anti-static agent, cationic latices.
Hyamine 10-X	Rohm & Haas Co.	Disobutyl cresoxy ethoxy ethyl dimethyl benzyl ammonium chloride	Germicide	Cryst.		cationic	Same as for Hyamine 1622.
Hyamine 2389	Rohm & Haas Co.	Alkylated (Co-Cos) tolyl methyl trimethyl ammonium chlorides	Germicide	Liquid	20%	cationic	Same as for Hyamine 1622.
Hymolon K	Hart Products Corp.	Fatty acid condensate	Detengent Wetting	Liquid	100%	anionic	Textile, wool scouring agent.
Hytergen BM	Hart Products Corp.	Modified alcohol sulfate	Detergent Wetting	Paste		anionic	Textile; scouring agent.
Hytergen GL #10	Hart Products Corp.	Sulfated fatty amide	Detengent Wetting			anionic	A water soluble salt free general scouring agent.
Hytergen MV	Hart Products Corp.	Sulfated fatty amide	Detergent Wetting	Powder		anionic	Water soluble. Textile; for print, rayon and cotton scouring.
Igepal CA-630	Aniara Chemicals Div General Dyestuff Corp.	Alkyl phenoxy polyoxyethylene ethanol	Detergent Wetting Emulsifier Dispersant	Liquid	100%	nonionic	Acid, alkali, hard water stable. Uses: General cleaner, insecticide, wax emulsifier, fire extinguisher, metal cleaners. Formerly Antarox A-200.
Igepal CA-633	Aniara Chemicals Div. General Dyestuff Corp.	Alkyl phenoxy polyoxyethylene ethanol	Detergent Wetting Emulsifier Dispersant	Liquid	33%	nonionic	Is a 33% aqueous solution of Igepal CA-630.
Igepal CA-710	Aniara Chemicals Div. General Dyestuff Corp.	Alkyl phenoxy polyoxyeihylene ethanol	Detergent Wetting Emulsifier Dispersant	Liquid	300%	nonionic	Jaepal CA-710 is similar to CA-630 but has higher solubility at elevated temperatures. Formerly Antarox A-201.

Remarks	Igeacal CD630 similar to Igeacal CA-630, but made from a different alkyl phenol. This is a series of compounds made by increasing the mole ratio of einylene oxide to alkyl phenol from about 4 to 30. Stable to acid and alkali. CD-850 and CD-880 have cloudpoints > 100°C; Igeacal CD-430 and CD-530 are oil soluble. Uses: Textiles, emulsion patints, metal cleaning, metal fluxes, insecticles, patint, metal cleaning, metal fluxes, insecticles, patint surface cleaner. CD-630 effective as an anti-static agent. Formerly Antarox A-400 etc.			Il CA-630 alstifier in y in those nulstifier is or pigment	all CA-630 listifier in y in those ulasitier is re pigment programment particular partic	Il CA-630 alstifier in y in those ubsitier is proment particular corring tersolutions.	alsifier in those nulsifier in those nulsifier is pigment particular caring ter-solutions. Anderon y Antaron y Antaron y Antaron	Il CA-630 alsither in y in those ubsither is re pigment particular caring tersolutions. Solutions. Solutions. Shwashing vegetable, y Antaron dditton for y Antaron T-51. For-	all CA-630 alsitier in those relating to particular corring ter- solutions.  solutions.  solutions.  Antaron  dditton for y Antaron  T-51. For-	alsifier in the particular particular caring termorphic y Antaron T.51. Formade from r foaming r foaming termode from r foaming r foaming termode from r foaming results the sand house-	all CA-630 alsifier in those or pigment particular caring ter- solutions. solutions. shwashing vegetable, y Antaron T-51. For- T-51. For- T-51. For- T-51. For- made from r foaming r stable to events the sund house- and house- and alkali.	all CA-630 alsitier in those or pigment to particular caring ter- solutions.  solutions.  solutions.  y Antaron  T-51. For- T-51. For- T-51. For- and alkali.  Stable to events the and alkali.  and alkali.  sended for aron N-185 on charac- or alkaline L-520 and	all CA-630 alsitier in those religionent particular caring ter- solutions.  solutions.  solutions.  solutions.  solutions.  Antaron  T-51. For- T-51. For- T-51. For- T-52. To caming the and alkalish to events the and house- and house- and charac- are alkaline L-520 and inorganic an stolchio- imulations.
Rem	Igepal (\$\infty\$630 similar to from a different alkyl p. compounds made by in ethylene oxide to alky 30; Stable to acid and (\$\infty\$0.530 are oil soluble paints, metal cleaning, hard surface cleaner, anti-static agent. Forme	A 33% aqueous solution of Igepal CO-630	Superior in wetting properties above 120°F. Of great value rubber latex emulsion paints process where a calcium-insen required. Uses: leather process linishes, textiles.	Same remarks as for Igepon 7-51 but of interest to soap manufacturers for prepnary-system scaps.	Stable to acids, alkali and Uses: Metal cleaning, compound, laundry etc., wool, silk and synthetic L-114, and Igepon T Gel.	Same remarks as for Igepon T-51 ouse in DDT wettable powders. L-135 or Igepon T Powder.	Same remarks as those merly Antaron L-177.	Corresponds to Igepon AP-78 except a different fatty acid and has properties.	Less concentrated form of Igep water of any degree of hard formation of lime scap. Uses: hold. Formerly Igepon AP Ex.	Less stable than Igepon T:73 in acid and Otherwise similar. Especially recommend wettable DDT powders. Formerly Antaron and Igepon AP Ex. Conc.	Low forming. Possesses surface adsorption teristics. Can be used in neutral or metal degreasing. Formerly Antaron Ligepon NF Paste.	Precipitation inhibitor for salts of Ba, Ca, Sr. Effect metric conc. Use: 2,4-D Scale preventive.	Used for the scouring of greasy wools. Stability to lime scalts permits its use for removing precipitated lime scaps from fabrics. Base for laundering, itself-barriers commounts match dishursething well charming commounts
Type	nonionic	nonionic	nonionic	anionic	anionic	anionic	anionic	anionic	anionic	anionic	anionic	anionic	anionic
% Conc.	7001	33%	%001	28%	16%	32%	72.5%	82%	21%	82%	28%	50%	16%
Form	Liquid to wax	Liquid	Liquid	Slurry	Gel	Powder	Wax	Powder	Powder	Powder	Thin gel	Liquid	Powder
Main Uses	Detergent Wetting Emulaitier Dispersont	Detergent Wetting Emulsitier Dispersant	Detergent Emulatier Dispersont Wetting	Detergent Wetting Dispersant	Detergent Wetting Dispersant	Detergent Wetting Dispersant	Detergent Wetting Dispersant	Wetting	Wetting Dispersant	Wetting Dispersant Detergent	Wetting Dispersant Detergent	Sequestering	Detergent Wetting Dispersant
Class and Formula	Alkyl phenoxy polyoxyethylene ethanol	Alkyl phenoxy polyoxyethylene ethanol	Alkyl phenoxy polyoxyethylene ethanol	Sodium-N-methyl-N-oleoyl taurate	Sodium-N-methyl-N-oleoyl taurate	Sodium-N-methyl-N-oleoyl taurate	Sodium-N-methyl-N-oleoyl taurate	Ester of sodium isethlonate	Ester of sodium isethionate	Ester of sodium isethionate	Sodium-N-cyclohexyl-N-palmitoyl taurate	Sodium-N-acyl-N-meihyl taurate	Sodium-N-methyl-N-palmitoyl taurate
Manufacturer	Antara Chemicals Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.	Aniara Chemicale Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.	Antara Chemicals Div. General Dyestuff Corp.
Trade Name	Igepal CO-430 Igepal CO-530 Igepal CO-710 Igepal CO-710 Igepal CO-850 Igepal CO-880	Igepal CO-633	Igepal CTA-639	Igepon T-42	Igepon T-51	Igepon T-73	Igepon T-77	Igepon AC78	Igepon AP-75	Igepon AP-78	Igepon CN 42	Igepon TK-42	Igepon TN-71

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Type	Remarks
Igepon TN-74	Antara Chemicals Div. General Dyestuff Corp.	Sodium-N-methyl-N-palmitoyl taurate	Detergent Wetting Dispersant	Powder	48%	anionic	Same remarks as for Igepon TN-71. Formerly Antaron L-245.
IN-181 P — 51% IN-181 Posto IN-256 IN-438 IN-826	E. I. du Pont de Nemours & Co.		Wetting				This is a series of wetting agents for use in agri- cultural products and sold only to processors. They represent renamed products offered thru other channels. See Duponol and Alkanol.
IN-531 IN-2503	E. I. du Pont de Nemours & Co.		Emulsifiers				These are emulsifying agents offered to processors in the agricultural field. They represent renamed products thru other channels. For example, IN-2503 is a fatty alcohol sulfate.
Indrawet Indrawet, HH	Industrial Raw Materials Corp.	Alkyl aryl sulfonate	Detergent	Powder	82%	anionic	Single alkyl side chain of Ce min. High detergency, Indrawet HH is a spray dried product for household use.
Integritol	Hart Harrington, Inc.	A sulfated alkylated benzene	Wetting				Alkyl chain is below Cs. Uses: Paints, textiles, leathers.
Intracol-Regular Intracol-OA Intracol-O	Synthetic Chemicals, Inc.	Long chain fatty acid amide containing multiple amine groups	Wetting	Powder		cationic	Textiles, rubber, pigments, etc. Intracol Regular and OA are water soluble, Intracol-O is oil soluble,
Intral AE	Synthetic Chemicals, Inc.		Wetting	Liquid	100%	nonionic	Water soluble. Stabilizing and wetting agent.
Intral 224	Synthetic Chemicals, Inc.	Sat. long chain fatty acid ester containing multiple ether linkages	Wetting	Liquid		nomionic	Not compatible with organic salts or electrolytes. Uses: Textiles, rubber, etc.
Intral 229 Intral 384	Synthetic Chemicals, Inc.	Sat. long chain fatty acid ester containing multiple ether linkages	Wetting	Liquid		nonionic	Water-soluble.
Intral 433	Synthetic Chemicals, Inc.	Sat. long chain fatty acid ester containing multiple ether linkages	Wetting	Powder		nonionic	Not compatible with organic salts or electrolytes. Uses: Textiles, rubber, etc.
Intramine WK	Synthetic Chemicals, Inc.	Sod, salt of sulfated lorol and myristyl collamide	Detergent Wetting	Powder		anionic	Water-soluble. Used in textile, metal cleaning, rubber, shampoos.
Intramine Y	Synthetic Chemicals, Inc.	Sod. salt of sulfated lorol and myristyl collamide	Detergent Wetting	Powder		anionic	Water-soluble. Used in textile, metal cleaning, rubber, shampoos.
Invadine BL Conc. Invadine B Invadine N	Clba Co.	Alkyl naphthalene sod. sulfonate	Wetting	Powder	100%	anionic	Uses: Textiles (for bleaching and carbonizing) Invadine BL Conc. is 100% active. Invadine B is more alkali stable than Invadine N.
Invadine C	Ciba Co.	Alkyl naphthalene sulfonic acid	Wetting	Powder		anionic	Very acid stable. Wool carbonizing.
Invadine D	Ciba Co.		Wetting	Powder			Textile: dye levelling, particularly with acid or chrome dyes.
Iono	Joseph Turner & Co.	Ethylene oxide condensate with fatty acids (tall oil)	Detergent	Liquid	100%	nonionic	A non sudsing type detergent.
Isothan Q-15	Onyx Oil & Chem. Co.	Lauryl isoquinolmium bromide	Fungicide	Liquid		cationic	General fungicide.
Janusol	Synthetic Chemicals, Inc.	Mixture of lauryl and myristyl esters containing both primary amino and sulfated groups	Dispersing	Powder		nonionic	Stable in alkaline solutions peroxide and hypo- chlorite. Use: Textile, rubber, paints.
Joy (retail)	Procter & Gamble Co.		Detergent	Liquid			Dishes and fine fabric detergent.
Kamenol D	Kamen Soap Products Co.	Alkyl aryl sod. sulfonate	Detergent	Powder	40%	anionic	General detergent for household use.
Komenol S-11	Kamen Soap Products Co.	Alkyl aryl sod. sulfonate	Detergent Emulsifier	Paste	20%	anionic	General cleaning agent. Emulsifier for insecticides.
Katapol VP-632	Antara Chemicals Div. General Dyestuff Corp.	Aikyl polyoxyethylene glycol amine	Detergent Stabilizer Penetrant	Liquid	20%	cationic	Scouring agent for wool in neutral or acid sol. Scouring agent and dyeing assistant for shearlings. Cleansing agent for removing mineral oil or wax from paper pulp or waste paper. Formerly Katapol K Conc.

Trade Name	Manufacturer	Close and Formula	Main Uses	Form	% Conc.	Type	Remarks
Kemulsion Base AA Kemulsion Base CC Kemulsion Base D Kemulsion Base PN	Kem Products Co.	Fatty derivatives of a poly alcohol	Emulsifier	Liquid		anionic	These emulsifiers are designed for the following uses: AA, coemetics: CC for coal tar disinfectants, D for DDT in Xylol, and PN for pine oil disinfectants.
Keripon NC	Arkansas Co.	A polyethylene glycol fatty acid ester	Wetting	Liquid	80%	nonionic	Leather degreasing, soaking and penetrant with latifiquers.
Kessco DC5B Kessco DC10 Kessco DC11	Kessler Chemical Co.	Complex polyhydroxy polycxyethylene fatty acid esters	Detergent Emulsifier	Liquid	%001	nonionic	DC-5B is an oil soluble dry cleaning detergent. DC-11 designed as above but for Stoddard solvent. Kessco DC 10 and 11 are anionic.
Kessco Wax A-21 Kessco Wax A-33	Kessler Chemical Co.	Faily acid ester of polyhydroxy alcohol	Emulsifier Dispersant	Wax	100%	nonionic	A series of cosmetic and pharmaceutical emulsi- fiers. Kessco A-21 is anionic and contains a self emulsifying ingredient. Otherwise identical to Kessco A-33.
Kessco X-10	Kessler Chemical Co.	Fatiy acid esters of polyhydroxy alcohols	Emulsifier	Wax	100%	nonionic	An edible emulsifier for margarine, etc.
Kessco 23201 Kessco 18303R	Kessler Chemical Co.	Polyglycol ether ester of fatty acids	Emulsifier Wetting	Liquid	100%	nonionic	Kessco 23201 is water soluble. Use: leather, textiles, paper, etc. Kessco 18303R is oil soluble. Use: Agricultural sprays.
Kreelon 4D Kreelon 4G Kreelon CD	Wyando.te Chemicals Corp.	Alkyl aryl sod, sulfonate	Detergent	Flake	40%	anionic	Conforms to alkyl aryl type detergent in detergent and wetting properties. Kreelon CD is a 38% active product incorporating 3.2% CMC. Kreelon 4G is in powder form.
Kreelon &G	Wyandotte Chemicals Corp.	Alkyl aryl sod, sulfonate	Detergent	Flake	82%	anionic	Conform to alkyl aryl type detergent in detergent and wetting properties. Kreelon 9G is powder form.
Le	Gallowhur Chemicals Co.		Wetting	Liquid		anionic	General detergent for household use; rug sham- pooing, dishwashing, floor cleansers, etc.
Lanadin	Standard Chem. Prod., Inc.		Emulsifier	Liquid		anionic	A general emulsitier for oils and solvents.
Lanamine	Robinson-Wagner Co.	A substituted alkylamine of selected lanolic acids	Detergent	Poste	100%	anionic	A high lathering detergent for cosmettes, particularly shampoos. A hair conditioning agent.
Lanitol-F Lanitol-CW	Arkansas Co.	Sod, alkyl aryl sulfonate	Detergent Wetting	Flake	40%	anionic	Textile; all operations. Lanitol-CW is 65% active powder built with alkalis to serve as a heavy duty cleanser.
Lathanol LAL	National Aniline Div. Allied Chem. & Dye Corp.	Sod, lorol sulfoacetate	Detergent	Powder	,	anionic	A concentrated product of approx. 3% water solubility for use in dentifrices, shampoos, etc. Solubility increased by use of solubilizing agents such as Naccosol-O etc.
Laurol	Fine Organics, Inc.	Dimethyl benzyl lauryl ammonium bromide	Germicide	Liquid	100%	cationic	The bromide of Germ-1-tol in 100% conc.
LD-100 LD-200 LD-300	Stepan Chemical Co.		Detergent	Liquid	%09	anionic	A line of liquid detergents for general use, differing in cloud points.
Lensex	Shell Petroleum Co. (London, England)	Sod. salt of secondary alcohol sulfate	Detergent	Paste	%44%	anionic	Paste form of Teepol, and similar to Teepex.
Leonil SA	Antara Chemicals Div. General Dyestuff Corp.	Dibutyl naphthalene sod. sulfonate	Wetting	Powder	80%	anionic	An acid dye levelling agent.

Trade Name	Manufacturer	Class and Formula	Main Uses	Form	% Conc.	Type	Remarks
Lightning Penetrator —XW	Commonwealth Color & Chem. Co.	Salt of a sulfated higher alcohol	Wetting		25%		Textile,
Lipal 450	E. F. Drew & Co.	A fatty acid ester of a poly ether alcohol	Wetting	Liquid	%86	nonionic	Useful for wetting where sait content is high.
Lomar PW	Jacques Wolf & Co.	Sod, sailt of a condensed naphthalene sulfonate	Dispersing	Liquid	%06	anionic	Dispersant for pigments in cement, ceramics, paper, etc. Compare also Daxad, Darvan, Tamol P, etc.
Lorol Sulfate, Tri- ethanolamine Salt	Onyx Oil & Chem. Co.	As in name	Detergent	Paste	84%	anionic	Similar in type to Duponol WAT. A shampoo base.
Lorridol	Beacon Co.		Detergent	Liquid			Very water soluble, (36%). Uses: Textiles, cosmetics.
Mapro Degum	Onyx Oil & Chemical Co.	*Sulfated fatty alcohol blend	Detergent				Textile processing.
Maprofix-Paste MM	Onyx Oil & Chemical Co.	Sulfated fatty alcohol blend	Detergent	Paste	44%	anionic	Textile processing, cosmetics. Maprofix TLS is tri- ethanolomine lauryl sulfate, useful as a shampoo base 85% active.
Maprofix-Paste Maprofix LK	Onyx Oil & Chemical Co.	Technical sod. lauryl sulfate	Detergent	Powder	45%	anionic	Textiles, household and industrial cleaning. Mapro- fix Powder LK is 90% active.
Mapromol HSY	Onyx Oil & Chemical Co.	Sulfated fatty alcohol blend	Wetting	Paste		anionic	Textile finishing.
Maprotex	Onyx Oil & Chemical Co.	Sulfated fatty alcohol blend	Detergent	Paste		anionic	Textile, continuous boil-off in wool scouring.
Marasperse C	Marathon Corp.	Highly purified calcium lignosulfonate	Dispersing	Powder	100%	anionic	A dispersant for sulphur, clay, pigments, insecticides, oil well drilling muds.
Marasperse CB	Marathon Corp.	Highly purified partially desulfonated sod. lignosulfonate	Dispersing	Powder	100%	anionic	A dispersant for carbon blacks, dyestuffs, pigments.
Marasperse N	Marathon Corp.	Highly purified sodium lignosulfonate	Dispersing Emulsifying	Powder	100%	anionic	An emulsion stabilizer and dispersant for dyestuff, pigments, wettable powder insecticides, industrial cleaners.
Maypon AL #2	Maywood Chemical Works	Ammonium salt of a protein condensate with lauroylchloride	Wetting	Paste	65%	anionic	Emulsifier.
Maypon 4C	Maywood Chemical Works	A protein condensation product with oley! chloride	Detergent Wetting Emulsifying	Liquid	35%	anionic	A lathering shampoo base. See also Lamepon (German). For Mig. — See Flat Report 1141 P. 69. Mild in eye irritation test.
Maypon K	Maywood Chemical Works	A protein condensation product with lauroyl chloride	Detergent Wetting	Liquid	37%	anionic	Dyeing bleaching and continuous boil off assistant for textiles. Emulsifying agent for insecticides.
Maypon M	Maywood Chemical Works	Protein split-off product of high molecular weight	Dispersing	Liquid	20%	anionic	Protective agent in scouring and dyeing of wool, wool mixtures and in reprocessing of wool.
Maypon SK	Maywood Chemical Works	A protein condensation product with a fatty chloride	Emulsifying Detergent	Liquid	42%	anionic	Scouring agent. Good detergency.
Maypon OW Maypon OWS	Maywood Chemical Works	Triethanolamine sait of Maypon K	Emulsifier	Paste	%06	anionic	Oil and water soluble. Emulsifier for DDT, etc. Maypon OWS is 45% active in strength, solvent diluted.
Maypon Powder	Maywood Chemical Works	Maypon K with filler	Detergent Wetting	Powder	45%	anionic	A product containing an inert filler such as kieselgabr
Mentor Beads	Colgate-Palmolive-Peet Co.	Alkyl aryl sod, sulfonate	Detergent Wetting	Bead	37%	anionic	Industrial, cleaner for paper, insecticides, textiles
Mercerol-R Mercerol-GS	Sandoz Chemical Works	Mixhture of xylenols	Wetting				Textile.
Merpenol	Jacques Wolf & Co.		Wetting				A textile wetting agent for use in strong alkalis.
Mercol-Extra Mercol-15 Mercol-25 Mercol-30	Riches-Nelson Inc. Lehigh Chemical Co. Seaboard Dist. Theobold Ind. (Mfg.)	Alkyl benzene sod, sulfongte	Detergent Wetting	Bead	37%	anionic	A built syndet base for a household cleaner. Mercol-15, 25 and 30 differ in density only.
Merpentine	E. I. du Pont de Nemours & Co.	Modified alkyl naphthalene sulfonate	Wetting	Liquid		anionic	Textiles; dyeing assistant.

o be continued



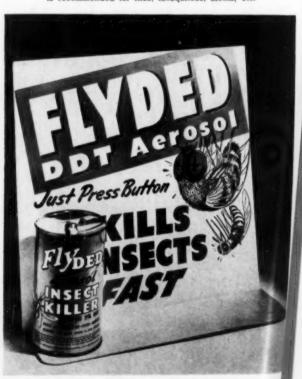
One of the newest additions to the line of Uncle Sam Chemical Co., New York, are perfumed, cedar pine, deodorizing blockettes. Individually wrapped in cellophane, the para blocks contain chlorophyll. One dozen blocks come packed in blue, tubular container. Blocks are recommended for use in wall containers, urinals, in smoky rooms.



Tennessee Soap Co., Memphis, recently added the new line of household items shown above. Items included are an insecticide, pine oil disinfectant, window cleaner, ammonia, liquid detergent and bowl santitzer. Line carries applied color lettering on Duraglas bottles of Owens-Illinois Glass Co.

A new display featuring "FlyDed" insecticide now being packed in a aerosol form by Boyle-Midway, Inc., New York. This newest addition to the "Black Flag" line is packaged in a five ounce container and retails for 59 cents. Product is recommended for files, mosquitoes, moths, etc.

### WHAT'S NEW?





New combination shipping-display box being used to introduce "Ipana" tooth paste with chlorophyll by Bristol-Myers Co., New York. The outside is printed in bright green, prominently showing product name and the individual tooth paste cartons, quickly establishing brand identification, acts as traveling billboard.

New tri-metal finish "Tanc-Typ" scap dispenser made by Moore Brothers Co., New York, New "500 C" design liquid scap dispenser holds 40 ounces of scap. It features standard Moore liquid valve. The dispenser is also available with lather valve as model "550 C."



"Oakite" cleanser of Oakite Products
Co., New York, is now appearing in a
newly designed package. The name
Oakite appears in lower case letters of
red against a white background on
upper portion of package. Copy on face
of package points to Oakite as allpurpose cleaner. Directions are on rear.



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# News

### **Cochrane in New Lever Post**

Lever Brothers Co., New York, recently named William H. Cochrane to the newly created post of indus-



WILLIAM H. COCHRANE

trial sales manager. Mr. Cochrane is responsible for the industrial detergent sales department, which is a newly created unit and for bulk edible and glycerin sales departments. Before joining Lever, Mr. Cochrane was associated with American Alcolac Corp., Baltimore, and with U. S. Industrial Chemicals, Inc., where he held the position of general manager and sales manager.

Previously, he held the positions of analytical chemist, territorial salesman, division sales manager, and manager of market and sales analysis with the U. S. Industrial Chemical Co New York.

### Hawley Joins Penn Salt

Pennsylvania Salt Manufacturing Co., Philadelphia, recently announced that John E. Hawley has joined its research and development division at the Whitemarsh Research Laboratories, Wyndmoor, Pa. Mr. Hawley's duties in the maintenance chemicals department of Pennsalt involve the development of cleaning compounds for the transportation industry. He was previously on the engineer of tests staff of the Baltimore and Ohio Railroad.

At about the same time it was announced that State Chemical Corp., newly formed subsidiary of Sterling Supply Corp., Philadelphia, has taken over the manufacture and complete sales of the sodium hypochlorite division of the Pennsylvania Salt Manufacturing Co.

### Frank Vance Dies

Frank Vance, shipping clerk for the Hunnewell Soap Co., Cincinnati, died recently at Covington, Ky. He was 65.

### **Atlantic Names Three**

Atlantic Refining Co., Philadelphia, recently appointed three petrochemical representatives in chemical product sales: Robert J. Beck, for Michigan and Northern Indiana and John L. Leech for Wisconsin, Minnesota, and Illinois, both working out of the Chicago regional office, and Robert J. Herman for Pennsylvania, New Jersey, Maryland, Virginia, and metropolitan New York, who will work out of the Philadelphia regional office.

### **More Surfactants Made**

Production of surface-active agents in 1951 totalled 683,000,000 pounds, representing a one percent increase over 1950, according to a recent report by U. S. Tariff Commission.

Sales during 1951 amounted to 587,000,000 pounds, valued at \$125,000,000, compared with 555,000,000 pounds sold in 1950 and valued at \$126,000,000.

Output of cyclic surface-active agents was 458,000,000 pounds in 1951, a 20 percent increase over the 1950 figure. Sales were valued at \$72,000,000 against 1950 sales of \$53,000,000.

Production of a-cyclic agents, however, amounted only to 225,000,-000 pounds, a drop of 23 percent. Sales decreased from \$73,000,000 to \$53,000,000.

### Changes at Warwick

The appointment of E. J. Black as sales manager of the industrial surfactant department of Warwick



E. I. BLACK

Chemical Co. division of Sun Chemical Corp., Long Island City, N. Y., was announced recently. At about the same time the resignation of Ernest Nathan, president of Warwick Chemical Co. division, and vice-president of Sun Chemical Corp., was announced. Mr. Nathan was also chairman of the chemicals group comprising the Warwick Wax subsidiary and Warwick Chemical Division of Sun. No successor to Mr. Nathan has been named as yet.

E. J. Black, prior to joining Warwick a few months ago, was associated with General Aniline and Film Corp., New York, in the central research laboratories in Easton, Pa. and Antara Sales Department, now Antara Chemicals Division of General Aniline and Film Corp.

Maurycy Bloch continues as vice-president of Warwick Wax Co. subsidiary of Sun.

### Young Joins Ultra Chemical

Appointment of R. M. Young as a member of the sales staff of Ultra Chemical Works, Inc., Paterson, N. J., was announced recently. Mr. Young covers the greater New York territory. Previously he served as vice-



# CITROVIOL

# DESCRIPTION

An aromatic chemical, practically colorless, with a smooth citrus-wood topnote and body. Soluble in 95% ethanol and all essential oils.

NOW AVAILABLE IN THREE GRADES:—Citroviol extra—Citroviol regular—Citroviol soap.

a tested soap aromatic

The excellent stability and lasting quality of Citroviol make it exceptionally valuable as an intensifier for soap perfumes.

Citroviol has been used successfully in concentrations from 3% to 10%, in extending Lilac, Violet, Rose, and many other floral bouquets.

In soap Citroviol has more body and lasts longer than does Linalyl Acetate. Also of great interest to the trade is the use of Citroviol as a replacement for the fullness of Bergamot.

CITROVIOL is also an excellent blender of Aldehydic notes. Used up to 20% in colognes, it makes a fresh bouquet brighter and more lasting. Write us on your company letterhead for a complimentary sample.

### The Dow Chemical Company

Aromatics Division . 629 Grove Street, . Jersey City 2, N. J. Dow Chemical of Canada, Limited, Toronto, Canada

Exclusive Sales Representative for SYNAROME in the United States, Canada and Cube



president in charge of sales for Plastic Weave Mills.

### Gray Handles "Dial" Sales

Appointment of J. A. Gray as sales manager for "Dial" and other consumer soaps was announced recently by Armour & Co., Chicago. Mr. Gray, formerly San Francisco district sales manager, has his new headquarters in Chicago.

### Colgate Offers New Cleaner

Colgate - Palmolive - Peet Co., Jersey City, recently announced "Arctic Syntex HD" a new synthetic detergent, recommended for hand dishwashing, cleaning floors, tile, terrazzo, linoleum, asphalt tile, painted surfaces, walls, woodwork, windows, and mirrors. The company suggests its use as a heavy duty detergent for laundering blankets, spreads, fine fabrics, and white flat work. According to Colgate the product is stable in hard water, a good foamer, and mild in its action, suitable for rug cleaning, etc.

### **Nelson Returns from Europe**

Joseph D. Nelson, executive vice-president of Andrew Jergens Co., Cincinnati, returned recently from a 41-day trip to North Africa, Italy, Portugal, Spain, France, Ireland, Norway and Sweden. According to Mr. Nelson, French suppliers of essential oils anticipate plentiful supplies of the floral oils.

Mr. Nelson believes that European countries are suffering from the shortages that hampered wartime soap production here and abroad. He said that while America's soap supply was filled quickly after the war, that is not the case in Europe, where fat shortages still exist and where people spend money only on what they consider essential.

According to Mr. Nelson Europeans still consider soap a luxury. Whereas in the U. S. free soap is considered a part of hotel and travel service, in Europe soap is noticeable by its absence even on the finest trains and in the best hotels.

While on his trip, Mr. Nelson arranged for Jergen's engineers to study a continuous French soapmaking process.

### **Lever Division Names West**

Appointment of Eugene N. West as assistant sales manager of Lever Division of Lever Brothers Co.,



EUGENE N. WEST

New York, was announced recently. Mr. West comes to Lever from Lehn & Fink Products Corp., New York, where he was general sales manager. His previous associations include U. S. Time Corp., New York, and Bauer & Black, Chicago. He started his business career with Safeway Stores, in Oakland, Calif.

### **Wrisley Offers Promotions**

Allen B. Wrisley Co., Chicago, recently announced two summer promotions in grocery, chain, and drug stores. They will be available throughout the east and southeast, and also in Wyoming, Colorado, Oklahoma, Texas, and North and South Dakota. One offer features a face cloth, in four pastel shades, free with every plastic bag of Wrisley eight cake toilet soap assortment. The second offer is a pine bath soap special which includes an additional full size cake of soap for half price with every two at the regular price. All three cakes are banded together for convenient unit sale.

### **Todd 25 Years at Solvay**

Harry C. Todd, manager of advertising and sales promotion for the Solvay Process Division of Allied Chemical & Dye Corp., New York, completed 25 years with Solvay July 15. He joined the then Solvay Sales Corp. in 1927 having previously been with the Savage Arms Co. He was the

guest of his colleagues at a special luncheon and recipient of a commemorative gift from William Atherton of Atherton & Currier, Inc., New York, which agency has handled the Solvay advertising account for the same 25 year period.

### M M & R Shifts Jensen

Magnus, Mabee & Reynard, Inc., New York, has transferred Arthur R. Jensen from its northwestern district office in Milwaukee, to Chicago, where he will be general manager of MM&R's midwestern division.

### **Describes 2-Ethylhexanol**

A new technical bulletin on 2-ethylhexanol was recently released by Carbide and Carbon Chemicals Co., New York. It supplies information on the physical constants of the material, and on its uses as a solvent, defoaming, dispersing, and wetting agent and as a chemical intermediate. It may be incorporated into insect sprays and emulsified disinfectant and detergent compositions, into dry-cleaning and textile soaps. 2-Ethylhexanol is shipped in one-gallon tin cans, five-gallon and 55-gallon drums, and in tank cars. Copies of technical bulletin F-7908 are available on request.

### Detergents' Effect Studied

Louisiana State University Agricultural Extension Service recently conducted a study of the effect of synthetic detergents on colored cotton laundry. The findings may be summarized as follows: Amount of synthetic detergent needed for home laundering was about half the amount of other detergents required. No one type of detergent or method of laundering caused more shrinkage of fabric than another. Dresses subjected to overlong washing showed a loss in weight-an indication that subjecting fabric to too much friction in washing may cause wear. The length of time a fabric is washed appeared to have more effect on loss of color than the detergent used. From this it is reasoned that washing machines should be run only long enough to get clothes



"...which reminds me,
Givaudan soap fragrances
are long on consumer appeal."

For information about soap-selling fragrances, write to

Givaudan-Delawanna, Inc. 330 West 42nd Street, New York 36, N. Y.

### Thomas S. Eagen Dies

Thomas S. Eagen, 82, a widely known Cincinnati athlete at the turn of the century, and an employee of Procter & Gamble Co., Cincinnati, for 46 years, died July 20 in St. Francis Hospital there, after being hospitalized for over a year. He started to work in the shipping department of P&G at Ivorydale in 1900, and at the time of his retirement in 1946 he was superintendent of the packing department in the general supervisor's office.

### Armour Plant Fire

A general alarm fire broke out in the four-story Armour & Co. soap works in North Bergen, N. J., recently. No one was injured. Damage was minor, and the plant resumed operations in two days. The plant is on meadowland at the foot of 83rd Street, near U. S. Route 1.

### Stokes & Smith Dinner

Stokes & Smith Co., Philadelphia, subsidiary of Food Machinery & Chemical Corp. recently gave a dinner for its employees, at which service pins were awarded.

William R. Huguenin, plant manager, spoke and introduced John D. Crummey, chairman of the board of Food Machinery. Mr. Crummey discussed the activities of Food Machinery & Chemical Corp. and congratulated Stokes & Smith on the service record of its employees.

Among those who received pins were 14 persons with over 40 years of service, and 84 with 20 to 30 years of service, and other groups down to five years of service. Carl E. Schaeffer, sales manager, second oldest employee in length of service, made the acceptance speech for all groups.

### **Rendering Firms Cited**

The Department of Justice recently filed a civil anti-trust suit against eight corporations and six individuals, charging that they had tried to monopolize the rendering materials industry. The action was filed in the Federal District Court at Detroit. Attorney General James P. McGrannery, who made the announcement, said the defendants had "engaged in predatory business practices" and that

there were interlocking controls among some of the defendant corporations which the Detroit court is being asked to break up.

Corporations named as defendants are Darling & Co., Chicago; the Van Iderstine Company, Long Island City, N. Y.; Globe Rendering Company, Chicago; Standard Rendering Company, Kansas City, Kan.; East St. Louis Rendering Company, East St. Louis, Ill.; Oklahoma Rendering Company, Oklahoma City; Indiana Rendering Company, Logansport, Ind., and Success Mills, Inc., Chicago. The individuals, described by the department as the reputed owners of substantial blocks of stock in these corporations, are Edward Morris, Chicago; Nelson Morris, Homewood, Ill.; Nelson Morris 2nd, Wilmette, Ill.; Carlos Alling, Winnetka, Ill.; Ruth Morris Bakwin, New York City, and Muriel Morris, Buttinger, Pennington, N. J.

Carlos Alling, president of Darling, which has eight plants, said: "I do not pretend to know the intricacies of the antitrust laws, but I have every confidence in the advice of our attorneys and believe that the outcome will be in our favor." A. M. Hayes, president of Van Iderstine Co., also expressed his confidence in the outcome of the proceedings.

### Solvay Advances Two

Appointment of W. E. Blair as executive assistant, reporting to the president, and of D. H. Ross as director of product development was announced recently by Solvay Process Division, Allied Chemical & Dye Corp., New York. Both appointments became effective July 1.

Mr. Blair joined Solvay's Boston sales office in 1919, became manager of the Detroit branch office in 1922, and director of sales with offices in New York in July 1931. In 1937 he became director of sales research for Solvay and in 1941 he was named manager of the product development department. He was appointed director of the department in October 1951.

Mr. Ross came to Solvay in 1934. He became assistant manager of the product development department in 1942. He succeeds Mr. Blair as its director.

### Lever Opens Newark Office

The opening of a new sales office in Newark, N. J., was announced recently by Lever Brothers Co., New York. It serves all of New Jersey and parts of New York. Previously New Jersey was served from the New York office.

The New York division has moved to 205 East 42d Street, and is headed by Louis Turan, field supervisor. Mr. Turan succeeds T. W. Pierce, who has been advanced to the position of regional sales manager of the marketing division.

The Newark office, located at 10 Commerce Court, is headed by Otto Ritzmann, Jr., formerly of the Syracuse and Pittsburgh divisions.

### Improved Fat Market Seen

Inedible fats and oils may reclaim some of the markets in the soap and other industries which they lost in recent years to petroleum based competitors, according to a recent report by the U. S. Department of Agriculture. New processing methods and improvements on old techniques turning tallow and grease into chemicals which may serve old purposes better are the basis for the department's forecast. A 44-page booklet released by the department describes some of these new developments. Other studies on the subject are to be released shortly.

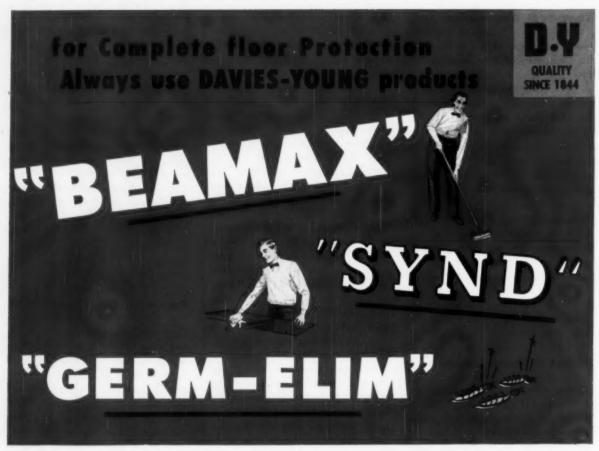
Special funds were authorized by Congress for the necessary research, because since World War II, inedible fats and oils consumption has not kept pace with the increased supply.

### Holbrook to NPA Post

Dr. George E. Holbrook, E. I. du Pont de Nemours & Co., Wilmington, Del., was recently named director of the chemicals division of the National Production Authority. Dr. Holbrook succeeds Osgood V. Tracy, who has returned to Esso Standard Oil Co., but will continue to be connected with NPA as a consultant. Dr. Holbrook has been serving as assistant director of the division since the end of March. He has been with du Pont since 1933, and is now on leave from his position as assistant director of the development department of the company.

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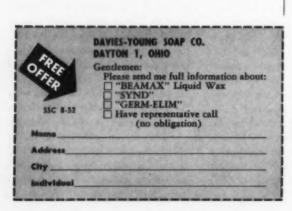




### "Beamax"

the Better Liquid Wax

It Beautifies Floors . . . it Protects : . . it outwears ordinary waxes 2 to 1! "Beamax" is the true imported Carnauba Wax. It dries to a lustre, no polishing . . . has a hard, wear-resisting, glossy, non-slip finish. Its lustre increases with each cleaning by simple buffing. Easily applied . . . has no odor . . . available in drums and cans. Mail the coupon below.





# "SYND"

Cleans ANY Surface! Makes water wetter!

Davies-Young "SYND" gets beneath soil and dirt, raises it and floats it away. "Synd" is quick-acting, neutral and Safe for all surfaces. A highly-concentrated product . . . easy on the hands, economical to use. Write for full details.

### "GERM-ELIM"

### The Triple-Action Cleaner

"GERM-ELIM" cleans, disinfects and deodorizes all in one quick and easy operation. It is 3½ times as potent as carbolic acid . . . has a pleasant odor and is non-injurious to the skin. Available in 1 to 55 gallon containers. Write today.

the DAVIES-YOUNG Soap Co.

Mail Coupon NOW

D.Y QUALITY SINCE 1844

### Hercules Advances Brown

Appointment of Werner C. Brown as an assistant director of sales for its cellulose products department was announced recently by Hercules Powder Co., Wilmington, Del. He had previously been supervisor of carboxymethylcellulose sales. Mr. Brown is in charge of sales of nitro-cellulose, products including CMC, cellulose acetate, ethyl cellulose and plastic molding powders. He has been with the company since 1942, when he joined Hercules as a chemist at the Experiment Station laboratories. He has been supervisor of CMC sales since December, 1949.

J. T. Skelly, Jr., remains as assistant director of sales for the cellulose products department. He is in charge of sales of nitro-cellulose, chlorinated products, as well as liaison with branch offices.

At the same time Hercules announced that A. R. Olsen has become manager of CMC sales succeeding Mr. Brown, while J. B. Martin replaces Mr. Olsen as manager of molding powder sales in the cellulose products department.

### Albert W. Peet Dies

Albert W. Peet, honorary chairman of Colgate-Palmolive-Peet Co., Jersey City, died July 22 at his home in The Walnuts, Kansas City. He was 80 years old. Under his direction the Peet Brothers Manufacturing Co., Kansas City, Mo. grew to become one of the largest soap companies in the world when it was merged with the Palmolive Co. in 1927. At that time Mr. Peet was elected chairman of the board and continued to hold that position after the Colgate Co. was merged into the group under the title of the Colgate-Palmolive-Peet Co. in 1931.

Mr. Peet entered the Peet Brothers Manufacturing Co. in 1886 as an office boy. It was founded in 1872 by his father, William Peet, a native of Liverpool, England, and two uncles. In 1901 he was named secretary-treasurer. He became president of the company in 1917 when his father retired.

In 1910 Mr. Peet was responsible for the continuation of the firm

after its Kansas City, Mo. plant at Twenty-first and McGee streets was destroyed by fire. He rebuilt the plant, this time in the Armourdale district of Kansas City, Kansas. During World War II, Mr. Peet returned to an active role in business filling in for a son, Herbert O. Peet, in the management H. O. Peet & Co., a brokerage firm, while the son served in the air force. Although he had been in retirement in recent years, Mr. Peet took an active interest in the rehabilitation of the Colgate-Palmolive-Peet Co. plant in Armourdale following the disastrous flood of last summer.

Mr. Peet and his wife, the former Orelle Smith, who were married in Kansas City and lived there since July 1890, observed their sixtieth wedding anniversary July 15, 1950. Among other business ventures Mr. Peet was formerly president of the Kansas City Missouri River Navigation Company. He is survived by his wife; one son, H. O. Peet, of Kansas City; and by two daughters, Mrs. Cady Daniels of Colorado Springs, and Mrs. G. D. Welch, of Kansas City. He was the uncle of Roy Peet, secretary, Association of American Soap & Glycerine Producers.

### **Blockson Offers Stock**

Blockston Chemical Co., Joliet, Ill., producer of sodium phosphates, recently announced plans to market 500,000 shares of common stock, the first public distribution of the company's shares since the business was founded in 1926.

The shares represent part of the holdings of the Block family, founders of the business. After the proposed sale the selling group will continue to own about two-thirds of the capital stock, the company announcement said.

In the past ten years, net sales have increased from \$2,859,188 to \$26,019,379. Net income before income taxes last year was \$8,164,196, and after taxes, \$2,874,146. The company's products are used in industrial and household soaps and detergents and in the oil and other industries. The company's biggest business growth has occurred in sodium tripolyphosphate.

### C. M. Fisher Dies

Chester H. Fisher, 50, secretary and treasurer of Cowles Chemical Co., Cleveland, died suddenly July 24 of a heart attack at his home in Brecksville, O. He joined the company in 1929, was elected treasurer in 1943 and become secretary in 1952. He is survived by his wife, Alice, and two children, Joanne and Robert.

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### A.O.C.S. Fall Meeting

The 26th fall meeting of the American Oil Chemists' Society will be held Monday through Wednesday, Oct. 20-22, at the Netherland Plaza Hotel, Cincinnati. R. C. Stillman of Procter & Gamble Co. is program chairman and N. S. Ruston of Emery Industries, Inc., chairman of the arrangements committee.

### **Filtrol Agents Meet**

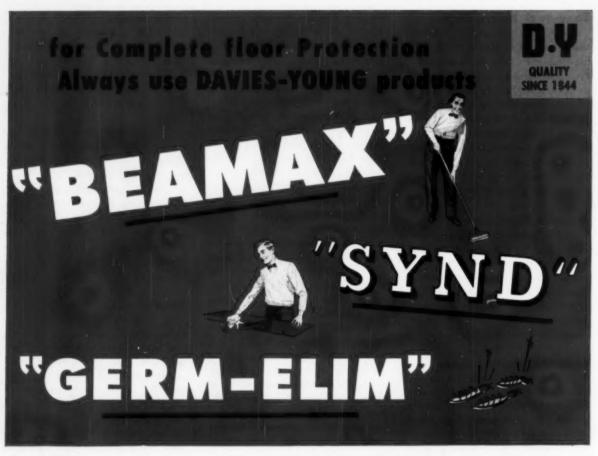
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Representatives from more than 20 countries recently attended the second international foreign agents' meeting of Filtrol Corp., Los Angeles. Welcoming the foreign representatives were Troy Monk, export manager, and other members of the Filtrol organization. In addressing the gathering, Stanard R. Fungsten, manager of sales for Filtrol, stated that in 1951 Filtrol shipped thousands of tons of its products to 48 different countries.

Present for the meeting were: Albert C. Dankelman of Socotecnic, Belgium; Carl G. Hunt of Otis, Mc. Allister & Co., Columbia, Venezuela; Robert G. Burke of Atkins, Kroll & Co., Philippine Islands; Fred S. Stevens of Dominion Oil Co., New Zealand; Renato Ibarra of Ernesto Ibarra y Cia, S.A., Mexico, who were present at the first foreign agents' meeting of Filtrol in Oct., 1949. Also Nicholas Bensmann of Dr. Hermann Bensmann, Germany; Rolando J. Longoni, Argentina; W. N. D. Stevens of Stemco, Ltd., Great Britain; Abel Lopes Martins of Abel Lopes Martins, Ltda., Portugal; F. Yamaguchi of Tokyo Boeki Kaisha, Ltd., Japan; C. G. Gips of W. R. Grace & Co., Chile and Peru; Axel Axelsen of Alf Axelsen, Norway, and Bondi M. Saporta, Egypt.

### Levis on Gair Board

Robert Gair Co., New York, recently announced that at a meting of the board of directors held June 24, William E. Levis, a director of Owens-Illinois Glass Co., Toledo, O., was elected a director of Gair Co., replacing Henry J. Sargent, who resigned.





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It Beautifies Floors . . . it Protects . . . it outwears ordinary waxes 2 to 1! "Beamax" is the true imported Carnauba Wax. It dries to a lustre, no polishing . . . has a hard, wear-resisting, glossy, non-slip finish. Its lustre increases with each cleaning by simple buffing. Easily applied . . has no odor . . available in drums and cans. Mail the coupon below.



# "SYND"

Cleans ANY Surface! Makes water wetter!

Davies-Young "SYND" gets beneath soil and dirt, raises it and floats it away. "Synd" is quick-acting, neutral and Safe for all surfaces. A highly-concentrated product . . . easy on the hands, economical to use. Write for full details.

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the DAVIES-YOUNG Soap Co.

Mail Coupon NOW

QUALITY SINCE 1844

FREE	DAVIES-YOUNG SOAP CO. DAYTON 1, OHIO Gentlemen: Please send me full information about:
SSC 8-52	"BEAMAX" Liquid Wax "SYND" "GERM-ELIM" Have representative call (no obligation)
Address	
City	
Individual	

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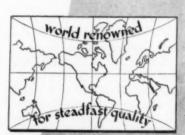
Your liquid soap
can smell as

# fresh as a day in May

For clean, fresh odors use a Schimmel aromatic compound in Your liquid or concentrated soaps.

We can offer a great variety of compounds and at very economical prices.

Ask for our s price list.



schimmel a co., inc.

601 West 26th Street, New York, 1, N. Y.

### **SAACI Sales Clinic**

A chemical sales clinic, sponsored by the Salesmen's Association of the American Chemical Industry, will be held at the Commodore Hotel, New York, Tuesday, Oct. 28. The all-day meeting will be open to members of the association, chemical salesmen and sales manager and chemistry students interested in entering the sales end of the industry.

Ralph L. Ericson, vice-president of Sumner Chemical Co., Zeeland, Mich., is in charge of the program, details for which will be announced in the near future.

### Amer. Potash Buys Eston

The acquisition and merger of Eston Chemicals, Inc., Los Angeles, which is now being operated as a division of American Potash & Chemical Corp., Los Angeles, was announced jointly early this month by Peter Colefax, president of American Potash and by A. M. Esberg, president of Eston. Mr. Esberg and George S. Wheaton, formerly vice-president of Eston, have been appointed vice-president and assistant vice-president, respectively of American Potash.

### **C-P-P Earnings Rise**

An increase in its net profit for the first half of 1952, as compared with the first six months of 1951, was reported recently by Colgate-Palmolive-Peet Co., Jersey City, N. J. In the first six months of this year C-P-P had a net income of \$3,719,000, or \$1.59 per share of common stock. This compared with \$3,465,000, or \$1.55 in the first half of 1951. Earnings for the second quarter of this year were above those of the second three months in 1951, according to the report. Operations in the second quarter of this year resulted in a new profit of \$1,470,000, equal to 62 cents a share, as against a loss of \$913,000 or 49 cents per share in 1951, president E. H. Little pointed out in his report.

Domestic sales for the first six months of 1952 amounted to \$123,-305,000. In the first half of 1951 they were \$120,905,000. For the three months ended June 30, 1952, the company had domestic sales of \$59,903,-

000, as against \$48,180,000 during the comparable period a year ago. World wide sales, including sales of foreign subsidiaries not consolidated totaled \$186,793,000 for the first half of 1952 and \$92,129,000 for the second quarter of this year. In the corresponding periods of 1951, world wide sales were \$183,218,000 and \$78,194,000, respectively.

### **Shell Names Bradley**

The appointment of D. F. Bradley as manager of its Detroit district sales office was announced recently by Shell Chemical Corp., New York. Mr. Bradley succeeds W. E. Keegan who has been appointed assistant to the vice-president, marketing. A graduate of the University of Notre Dame, Mr. Bradley began his association with Shell in the firm's Detroit office in 1947 as a technical salesman. Later he moved to the New York office as manager of the solvents department.

Shell, which recently purchased the Denver firm of Julius Hyman & Co., is centralizing all of its agricultural activity there, it was announced recently by J. Ostermeyer, Shell president. Personnel changes announced at the same time include the naming of F. W. Hatch as vice-president of Hyman and manager of the new division. Also L. F. Stayner of Shell's New York sales staff has been appointed sales manager of Julius Hyman & Co. division. P. E. Joyce heads export sales and development department, located in New York.

J. M. Selden, formerly sales manager of Shell's eastern division, has been appointed manager of the eastern division. He has been associated with the marketing of Shell Chemical products since 1933, first as vice-president and director of R. W. Greeff & Co., New York, agents until 1946 for the sale of Shell chemical products east of the Rockies, and then as sales manager of the firm's eastern division, created in 1946 along with five subsidiary district sales offices.

The strike at the Shell refining plant in Houston, Tex. which had stopped production of synthetic glycerine since May 1, ended early last month and full scale production has been resumed.

### Seek Cold-Water Detergent

A detergent that will wash all clothes in cold water is one of the aims of chemical research in the soap industry according to Dr. N. W. Ziels, who spoke recently before the American Chemical Society. Dr. Ziels who is chief chemist at the Hammond, Ind. plant of Lever Brothers Co., New York, said that the ideal substance had not yet been found but that there was hope. It will require no rinsing, and will make fabrics mildew and moth proof.

### **New Fritzsche Price List**

Fritzsche Brothers, Inc., New York, recently issued a new edition of its price list for essential oils, aromatic chemicals and other products.

### P&G Tests Home Wave

Procter & Gamble recently began distribution in Southern Ohio of a new no-neutralizer home permanent wave kit called "Pert." Advertising in the test area comprising heavy use of television, radio, and newspaper promotion. The company also makes "Lilt."

### Lever Samples 'Chlorodent'

Lever Bros. Co., New York, distributed sample tubes of its "Chlorodent" tooth paste containing chlorophyll throughout Chicago last month, using the mails to effect delivery.

### Felton Announces Changes

Felton Chemical Co., Brooklyn, N. Y., recently announced removal of its Chicago offices to new and larger quarters at 325 West Huron Street. The new location provides 2,000 square feet of floor space and incorporates laboratory and warehouse facilities, a stock and shipping center, and offices for the firm's midwest representatives, Murray Hartstein and Robert I. Burke. The Chicago office services northern Illinois, Wisconsin, Minnesota, Iowa, Nebraska, North Dakota and South Dakota.

At the same time Felton announced that its Midwest representative, A. Stanley Maas, has moved from Toledo to Cleveland. He covers Ohio, Indiana, and Michigan.



the finest, general-purpose disinfectant they have ever used! — and NO ONE ever gets tired of the fresh mint fragrance —

# **Winter-phene**



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Please send Free Sample and literature on WINTER-PHENE — the disinfectant with the Fresh Mint Odor.

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City.

SOAP and SANITARY CHEMICALS

DISINFECTANT

DEOBORANT

### Offers New Emulsifier

"Ceramol", a new ivory-white wax made of higher alcohols and alcohol sulfates, was announced recently by Aceto Chemical Co., New York. It produces stable oil-in-water emulsions over a wide range of viscosities by simple agitation, according to the manufacturer. "Ceramol" is also claimed to be stable over a wide pH range permitting formulations which include acids, alkalis, or salts. It is claimed not to be an irritant or sensitizer of the human skin, but to possess emollient properties. Aceto says it is suitable for the preparation of creams, shampoos, ointments and various specialties. Samples and data sheets are available on request.

### **Confectioners Hear Magnus**

Percy S. Magnus, president, Magnus, Mabee & Reynard, Inc., New York, served as chairman and toastmaster at ceremonies staged in Chicago recently during the convention of the National Confectioners Association. The occasion was the presentation of the annual "Kandy Kettle" award for outstanding contributions to progress of the confectionery industry. Mr. Magnus, in a brief speech at a Blackstone Hotel dinner, reviewed the history and purpose of the award, introduced previous Kettle award winners and unveiled the portrait of this year's "Candy Man of the Year."

### **New Mathieson Bleach**

A new laundry bleach which is added directly to the washer in dry form was announced recently by Mathieson Chemical Corp., Baltimore. "Ad-Dri" is a dry hypochlorite compound, said to give maximum whiteness with minimum loss in tensile strength. Its application does not materially change the laundry cycle, being added to the washer in the second rinse instead of the last suds as is customary with liquid bleaches.

According to Mathieson, plants using the new product will no longer have to stock soda ash or bother with tanks, crocks or stirring devices. Supervision and labor employed in measuring, weighing and mixing dry and liquid components as well as handling, breakage and storage problems associ-

ated with liquid bleach carboys are eliminated. "Ad-Dri" bleach is said to be free flowing and readily soluble in water. It is packed in 100 and 200 pound fiberboard containers, provided with plastic cups calibrated for laundry loads from 25 to 400 pounds.

### Seek New Chemical Ideas

American chemists with a new idea pressing for acceptance are invited to tell their stories in the "Trail Blazers" exhibit which will be a feature of the 7th National Chemical Exposition in the Chicago Coliseum next Sept. 9 to 13. A special area has been set aside where "tomorrow's budding genius may introduce the chemical triumphs of the next few years," an announcement of the project states. Each exhibitor, individual or group, will be given a 4 x 3 foot panel, without cost, on which to show his idea. No commercial or advertising exhibits will be accepted.

Requests for exhibit space should be directed to Herbert F. Schwarz, care of Sherwin Williams Co., Roseland Station, Chicago 28, who is in charge of this feature. Purpose of the Trail Blazers exhibit, Mr. Schwarz explained, is to bring new chemical ideas to the attention of users.

### **Hooker Lets Contract**

Hooker Electrochemical Co., Niagara Falls, N. Y., recently awarded the contract for the construction of its new ten million dollar chlorine-caustic plant at Montague, Mich., to H. K. Ferguson Co., Cleveland. The plant is expected to be in operation by the end of 1953 with a yearly production rate of approximately 100,000 tons. Ferguson engineers are cooperating with Hooker's engineering department in the development of the plant design.

Electrolytic diaphragm cells of special Hooker design will be used to convert brine into chlorine, caustic soda, and hydrogen. Brine is to be piped from the company's own cells, a short distance from the plant site. Test drilling in the 200-acre brine field has indicated a salt supply of high purity and in a concentration of over a million tons per acre. One salt well has been completed, and additional wells will be drilled later this year.

### Glycerine Export Quota Up

The Office of International Trade recently announced a five million pound increase in the second quarter export quota for crude and refined glycerine, 100 per cent glycerol content. The current quota is 5,800,000 pounds, compared with 800,000 pounds in the previous quarter. Current annual production in the United States exceeds 210,000,000 pounds.

### **Helene Curtis Founder Dies**

Louis P. Stein, founder and, since 1947, chairman of the board of the Helene Curtis Industries, Chicago, died in his Chicago home June 24, at the age of 58 years.

### **Exhibit at AMA Show**

Five manufacturers of soaps, synthetic detergents and chemical specialties participated in the three-mile-long trade show and technical exposition of the American Medical Association's 101st annual session in Chicago, recently, staged on Chicago's Navy Pier.

Procter & Gamble Co., Cincinnati, O., offered doctors their series of time-saving "Instruction" leaflets and gave visitors sample cakes of "Ivory" soan.

Calgon, Inc., Pittsburgh, Pa., demonstrated use of "Calgon" water softening compounds for personal bathing, dishwashing and laundry work

John M. Breck, Inc., Springfield, Mass., featured industrial skin preparations, including an oil resistant cream, a water resistant cream, a liquid hand cleaner, a cream for use after exposure to degreasing materials, and "Baby Breck Lavo", a mild liquid for washing infants.

Homemakers Products Corp., New York, presented "Diaprene" chloride tablets for use in the final rinse water for infants' diapers, to prevent ammonia dermatitis or "diaper rash."

Walter G. Legge Co., New York, demonstrated "Conducote" for application to most floorings to carry off static electric charges, and also a complete line of floor products and floor equipment and maintenance supplies.

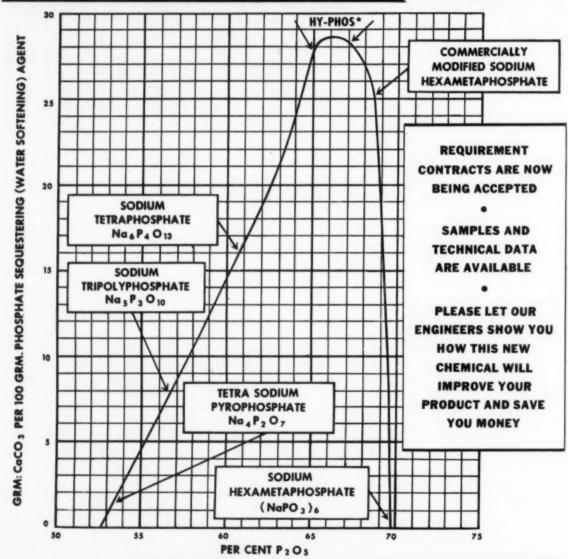
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U. S. PATENT NO. 2,574,047 GRANTED NOV. 6, 1951

\* Trade-Mark

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USE this handy reference to save time in selecting high quality chemicals.

### HOOKER TOLUENE DERIVATIVES

### BENZYL CHLORIDE

Synonym: Alphachlorotoluene Formula: C6H5CH2CI

Appearance: Clear, colorless to light yellow liquid.

### TYPICAL PROPERTIES

Molecular Weight 126	.5
Freezing Point43°	C
Distillation Range (Refined) 5° or less incl. 179.4°	C
Distillation Range (Tech.) 6° to 10° incl. 179.4°	C
Specific Gravity (Refined), 15.5°/15.5° C 1.10	7
Specific Gravity (Tech.) 15.5°/15.5° C 110	16

### USES

Intermediate: Chemicals, dyestuffs, rubber accelera-tors, gasoline gum inhibitors, perfume bases, plasticizers, resins, wetting agents, pharmaceuticals.

### BENZOIC ACID

Synonym: Phenylformic Acid Formula: C6H5COOH Appearance: White, odorless, crystalline solid. USP grade in powdered form; Technical grade in powdered or bead form.

### TYPICAL PROPERTIES, USP GRADE

Molecul	ar We	eight		 											122.1
Melting	<b>Point</b>					*				 			1	122	.0° C
Benzoic															
Water												-	3 5	300	Max

### USES

Intermediate: Dyes, pharmaceuticals, perfumes. Textile: Dyeing assistant, dye stripping agent, preservative for sizing.

### Preservative: Foods, cosmetic creams, lotions, tobacco.

### SODIUM BENZOATE

Synonym: Benzoate of Soda Formula: CaHsCOONa Appearance: White, odorless, crystalline solid in flake or powdered form. Available in USP or Technical grades.

### TYPICAL PROPERTIES, USP GRADE

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Mol	ecul	or V	Vei	9	hi											0	0		 					144	.1
Sod	lium	Ben	ZO	at	8																		99	+	%
Ben	zoic	Aci	d.									 								1	0.	.2	%	Ma	x.

### USES

Preservative: For foods such as tomatoes, fruit juices, syrups, margarine; also preservative for pharmaceutical and cosmetic preparations, tooth paste. Corresion Inhibitor: For glycol anti-freeze solutions, chlorinated solvent type metal cleaners, etc. Chemical Intermediate: Dyestuffs and pharmaceuticals.

### BENZOYL CHLORIDE

Formula: C6H5COCI Appearance: Clear, colorless liquid.

### TYPICAL PROPERTIES

Molecular Weight								 					140.5
Freezing Point								 				_	-0.9° C
<b>Boiling Point</b>					 								198° C
Specific Gravity	15	-	0	9	24	0							1 210

### USES

Chemical Intermediate: Introduce benzoyl group into

organic compounds.

End Products: Benzoyl peroxide, benzophenone and benzyl benzoate.

Derivatives: Include polymerization catalysts, bleaching agents, perfumes, dyes and pharmaceuticals.

### BENZOTRICHLORIDE

Synonyms: Alphatrichlorotoluene Phenyl Chloroform Formula: C6H5CCI3 Appearance: Clear, colorless liquid.



C-0-Na

### TYPICAL PROPERTIES

Molecular Weight ...... 195.5 
 Freezing Point
 —5° C

 Distillation Range
 219° to 223° C

 Specific Gravity, 15.5°/15.5° C
 1.380

### USES

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Intermediate: Chemicals and dyestuffs.

### MONOCHLOROTOLUENE

Synonym: Methylchlorobenzene Formula: CH3C6H4CI Appearance: Clear, colorless to straw colored liquid.



### TYPICAL PROPERTIES

Molecular Weight ..... 
 Freezing Point
 below −45° C

 Distillation Range
 158.3° to 161.7° C

 Specific Gravity, 15.5°/15.5° C
 1.080

### USES

Solvent: Rubber and synthetic resins. Intermediate: Manufacture of rubber accelerators. chemicals.

For more information on items listed, drop a note on your letterhead to HOOKER ELECTROCHEMICAL COMPANY, Buffalo Ave. & Union Street, Niagara Falls, N. Y.

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### Bids and AWARDS

### Navy Scap Powder Bids

A recent opening for miscellaneous supplies by New York Navy Purchasing Office included soap powder, item 1, 110,000 pounds in one pound units, and item 2, 205,000 pounds in five pound units, for a, Mechanicsburg, and b, Clearfield. Lowest bids were submitted by Iowa Soap Co., Burlington, Ia., on item 1a, 9 cents, and by Pacific Coast Borax Co., Los Angeles, on item 1b, 7.9 cents; 2a, 8.73 cents; 2b, 7.07 cents.

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### Low Bids on Potassium Soap

Low bids on 625,000 pounds of potassium type bar soap for a, Mechanicsburg; b, Norfolk; c, San Pedro; d, Clearfield; e, Seattle, in a recent opening for miscellaneous supplies by New York Navy Purchasing Office were submitted by Lever Brothers Co., New York, as follows: 1a, 5.169 cents; b, 5.288 cents; c, 4.95 cents; d, 5.882 cents; e, 6.176 cents.

### **Sweeping Compound Bids**

In a recent opening for miscellaneous supplies by New York Navy Purchasing Office low bids on 550,000 pounds of mineral oil type sweeping compound for a, Bayonne; b, Philadelphia; c, Norfolk; d, Great Lakes; e, San Pedro; f, Seattle, and g, Bremerton, were submitted by Sanitary Soap Co., Chicago, a, 2.2 cents and b, 2.35 cents; by Clean Sweep Manufacturing Co., Charlotte, N. Ct., c, 2.51 cents; by Frank Miller & Sons Co., Chicago, d, 2.65 cents; by Continental Chemical Co., Cleveland, e, 2.32 cents; f, 3.7 cents and g, 2.74 cents.

### Low Bids on Cleaner

A recent opening for miscellaneous supplies by New York Navy Purchasing Office included 25,000 pounds of cleaner (item 1), and 50,000 pounds (item 2), for a, Bayonne; b, Great Lakes; c, San Pedro; d, Seattle; e, Mechanicsburg; f, Clearfield. The following submitted low bids; Harley Soap Co., Philadelphia, on 1a, 10.7

cents; 1b, 12.2 cents; 1d, 13.5 cents; Kelite Products Co., Los Angeles, on 1c, 11.5 cents; 2f, 11.8 cents; Octagon Process Co., Staten Island, N. Y., on 2e, 10.34 cents.

### Low Bid on Cleaner

In a recent opening for miscellaneous supplies by New York Navy Purchasing Office low bids were submitted by B. T. Babbitt Co., New York, on 118,200 cans of alkaline scouring powder for a, Bayonne; b, Norfolk; c, Great Lakes; d, San Pedro; e, Oakland; f, Seattle: destination a, 4.8 cents; b, 5.3 cents; c, 4.8 cents; d, 5.25 cents; e, 5.525 cents; and f, 7 cents.

### **Navy Cleaner Bids**

Low bids on 68,000 cans of toilet bowl cleaning compound for a, Bayonne; b, Norfolk; c, Great Lakes; d, San Pedro; e, Oakland; f, Seattle, in a recent opening for miscellaneous supplies by New York Navy Purchasing Office were submitted by Judson Dunaway Corp., Dover, N. H., with bids of a, 11.15 cents; b, 11.77 cents; c, 10.95 cents; d, 13.02 cents; e, 13.02 cents; and f, 13.02 cents.

### **Navy Insecticide Bid**

In a recent opening for miscellaneous supplies by New York Navy Purchasing Office, Barco Chemicals Inc., Des Moines, Ia., was lowest bidder on 6,530 gallons of DDT emulsion concentrate, with a bid of \$1.46.

### Low Bids on Disinfectant

Low bids on 14,928 gallons of disinfectant for a, Boston; b, Newport; c, Brooklyn; d, Bayonne; e, Philadelphia; f, Norfolk; g, Cherry Point; h, Corpus Christi; i, San Diego; j, San Pedro; and k, Oakland, in a recent opening for miscellaneous supplies by New York Navy Purchasing Office were submitted by Gallowhur Chemical Corp., New York, as follows: destination a, \$2.96; b, \$2.931;

c, \$2.92; d, \$2.84; e, \$2.96; f, \$2.88; g, \$3.131; h, \$3.51; i, \$3.45; j, \$3.31; k, \$3.09, and f.o.b. plant \$2.78.

### Soap Powder Bid by P.O.

In a recent opening for miscellaneous supplies by U. S. Post Office Department, Washington 25, D. C., Spazier Soap & Chemical Co., Santa Monica, Calif., was low bidder on 60,000 pounds of soap powder with a bid of 4.27 cents.

### Navy Chlordane Bid

In a recent opening for miscellaneous supplies by New York Navy Purchasing Office low bids were submitted for 1,000 gallons of chlordane insecticide concentrate in five-gallon cans for a, Norfolk, Va., and b, Oakland, Calif., by R. M. Hollingshead Corp., Camden, N. J., destination a, \$4.062; and by California Spray-Chemical Corp., Richmond Calif., for destination b, \$4.04.

### Low Bid on Soap Powder

Low bids on 3,950,000 pounds of soap powder for a, Newport; b, Bayonne; c, Clearfield; d, Norfolk; e, San Pedro; f, Velox; g, Seattle, in recent opening for miscellaneous supplies by New York Navy Purchasing Office were submitted by Kamen Soap Products Co., New York, as follows: a, 4.59 cents; b, 4.39 cents; c, 5.8 cents; d, 4.34 cents; e, 5.8 cents; g, 5.8 cents.

### **FSS Soap Bids**

A recent opening for miscellaneous supplies by Federal Supply Service, Washington 25, D. C., included item 1, 8,496 pounds of paste soap, item 2, 2,000 pounds, item 3, 24,000 pounds, item 4, 10,128 pounds of soap powder, item 5, 19,600 pounds, and item 6, 118,750 pounds. The following low bids were submitted: Skat Co., Hartford Conn., item 1, 7.7 cents; E. F. Drew & Co., New York, item 2, 7.97 cents; National Chemical Laboratories, Philadelphia, item 3, 6.7 cents; National Milling & Chemical Co., Manayunk, Philadelphia, item 5, 4.1 cents; and Stevens Soap Co., Brooklyn, N. Y., item 6, 3.75 cents.

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# NEW Erade Marks

THE following trade marks were published in recent issues of the Official Gazette of the U. S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany each notice of opposition.

Ace Alkali-This for solid alkaline composition, containing predominantly caustic alkali for machine washing of bottles, etc. and other cleansing uses not involving substantial contact with the skin. Filed February 8, 1951 by Allied Chemical & Dye Corp., New York. Claims use since May 1950.

Repso CD-This for surfaceactive agent with cation-active characteristics used as an additive to bactericidal agents. Filed November 22. 1950 by Refined Products Corp., Lyndhurst, N. J. Claims use since May 15, 1950.

Daniola-This for liquid soap. Filed February 18, 1952 by West Disinfecting Co., Long Island City, N. Y. Claims use since February 1, 1921.

West - This for disinfectants, deodorants, antiseptics, insecticides, chemical preparations for air purifying purposes. Filed March 22, 1951 by West Disinfecting Co., Long Island City. Claims use since December 1,

Busan-This for chemical compositions for the control of microorganisms. Filed October 5, 1951 by Buckman Laboratories, Inc., Memphis, Tenn. Claims use since June 1,

Velsicol-This for insecticides and fungicides generally, and specifically for those generically known as chlordane, heptachlor, dieldrin, and aldrin, and for compositions contain-ing same. Filed October 26, 1951 by Velsicol Corp., Chicago. Claims use since September 1940.

Zam-This for liquid chemical concentrate for washing glassware and dishes. Filed February 10, 1950 by Chemical Service of Baltimore, Baltimore, Md. Claims use since January 24, 1950.

Kemsuds - This for powdered hand soap. Filed March 1, 1950 by the Chemical Corp., Springfield, Mass. Claims use since April 17, 1944.

Twin Light-This for chemical preparation for control of mice and rats. Filed August 19, 1950 by Seacoast Laboratories, Inc., New York. Claims use since July 1950.

Eldhyco - This for fatty acids

suitable for use in making soap. Filed September 29, 1951 by El Dorado Oil Works, San Francisco. Claims use since May 7, 1951.

Wedac-This for synthetic detergent and organic inhibitor-namely an acid cleaner and rust remover for metals. Filed March 2, 1951 by West Disinfecting Co., Long Island City. Claims use since December 8,

Penso-This for alkaline detergents for bottle washing and related uses in dairies and food and beverage processing plants. Filed December 8, 1950 by Pennsylvania Salt Manufacturing Co., Philadelphia. Claims use since January 20, 1950.

Germelim-This for cleaner for floor scrubbing solutions and having incidental disinfectant properties. Filed September 9, 1950 by Davies-Young Soap Co., Dayton, Ohio. Claims use since August 31, 1950.

Rik-Rak - This for cleansing powder for general household use. Filed June 5, 1950 by Safeway Stores, Inc., Baltimore, Md. Claims use since December 15, 1949.

No-Boil-This for washing compound for cleaning clothes, having incidental bleaching properties, and for removing stains, cleaning floors, glass, etc. Filed October 17, 1949 by No-Boil Fluid Chemical Co., James-town, N. Y. Claims use since July 1,

Simoniz-This for chrome and metal cleaner in liquid form, and for a tar solvent in liquid form. Filed March 10, 1951 by The Simoniz Co., Chicago. Claims use since May 16,

Sudslets-This for detergent tablets for use in a fountain brush. Filed April 25, 1951 by Automatic Controls Corp., Ann Arbor, Mich. Claims use since December 13, 1950.

Lifebuoy—This for shaving cream. Filed September 21, 1951 by Lever Brothers Co., New York Claims use since May 31, 1928.

Instantaneous-This for preparation for removing ink, dirt grease from various surfaces. Filed May 5, 1948 by Chalmers Chemical Newark, N. J. Claims use since 1922.

Marchand's -This for castile hair shampoo. Filed November 1, 1950 by Charles Marchand Co., New Claims use since November 1931.

Mercury Compound Formula 7-II—This for general household cleanser. Filed November 18, 1950 by Theobald Industries, Kearny, N Claims use since November 20, 1940.

Mercury Compound Formula 22—This for industrial cleanser. Filed November 22, 1950 by Theobald Industries, Kearny, N. J. Claims

use since July 15, 1940.

G S—This for toilet soap and shampoo. Filed March 1, 1951 by

Girl Scouts of the United States of America. Claims use since February 1. 1947

Monix—This for compound comprising detergent and insecticide ingredients for use in cleaning and moth-proofing fabrics. Filed June 1, 1951 by G & P Co., Wilmette, Ill. Claims use since May 23, 1951.

Whistlclean—This for a detergent for general industrial clean-

ing purposes Filed June 30, 1951 by L. Sonneborn Sons, Inc., New York. Claims use since September 15, 1941.

Cole's—This for disinfectants for household, industrial and institutional uses. Filed April 28, 1949 by

tional uses. Filed April 28, 1949 by
Cole Chemical Co., St. Louis, Mo.
Claims use since August 11, 1911.

Spra-Kill—This for insecticides and insect sprays. Filed March
22, 1950 by Eagle Products Co.,
Chattanooga, Tenn. Claims use since
March 4, 1950

Crow Brand—This for insect

Crow Brand-This for insect powder. Filed March 1, 1951 by J. L. Hopkins & Co., Brooklyn, N. Y. Claims use since April 1907.

Mothomat—This for moth re-pellent crystals and pressed blocks. Filed March 23, 1951 by Uncle Sam Chemical Co., New York. Claims use since April 2, 1923. Click Hang-Vers—This for

moth repellent crystals and pressed blocks, incorporating a deodorant. Filed October 22, 1951 by Click Chemical Co Claims use since August 1, 1951.

Airplant-This for combined air-odor neutralizing wick and container. Filed October 25, 1951, by Airplant Corp., New York. Claims use since June 28, 1951.

Lustrelite—This for ammoni-

ated tooth powder. Filed September 13. 1949 by Kathryn, Inc., Chicago,

13, 1949 by Kathryn, Inc., Chicago. Claims use since August 9, 1949.

RAMCO—This for powdered, flaked and paste wax, and self-polishing liquid wax for polishing and conditioning ball room floors. Filed August 2, 1948 by Sterling Jones Laboratories, St. Paul, Minn. Claims use since January 1, 1929

Castorwax—This for wax-like

material derived from castor oil suitable as a polish dressing, or finish. Filed February 23, 1951 by Baker Castor Oil Co., Jersey City. Claims use since January 21, 1946.

LX3-2-1—This for rodenticides. Filed November 28, 1951 by D.Con Company Chicago, Claims use

D-Con Company, Chicago. Claims use since September 9, 1951.

Snow—This for comminuted soap. Filed January 27, 1950 by Procter & Gamble Co., Cincinnati. Claims use since 1918.

Rill-O-Whip-This shampoo. Filed August 10, 1950 by Rilling Co., New York, now by change of name Rilling Dermetics Co. Claims use since August 2, 1950.

Rinsalene-This for rinsing Ransatene—This for rinsing and cleaning solvent for removing carbon, oil, tar, etc. from metallic parts. Filed September 7, 1950 by Fischer Industries, Inc., Cincinnati. Claims use since December 16, 1949.

Winthrop-Stearns-This for antibacterials, emollient sudsing antibacterial disinfectant, antiseptic and disinfectant preparations. Filed February 9, 1951 by Winthrop-Stearns, Inc., New York. Claims use since January 1948.

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Special low iron grade—45 to 50%. Available in 675 lb. drums and tank cars.

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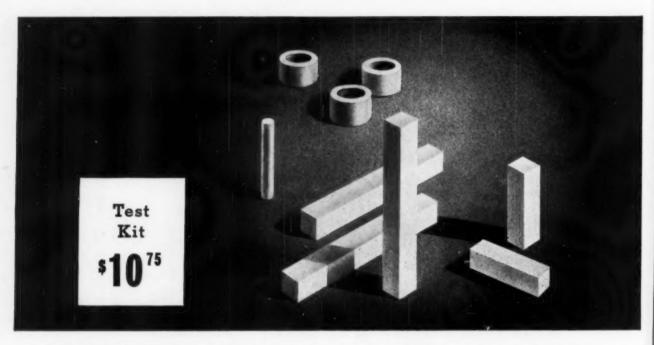
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# Now, TEST NEW CARBOLOY for corrosion,



FOR METALLURGISTS! ENGINEERS! PRODUCT DESIGNERS! Lab-test kit of new Grade 608 Carboloy Chrome Carbide. Includes: three bars ¼" square x 2"; two bars ¼" square x 1"; three bushings 5/16" long, ½" O.D., 5/16" I.D.; one rod ¾" diameter x 1" long. (Bulletin WR-104 included.) Samples adequate for wide

range of metallurgical and chemical tests. Additional information relative to your application free, on request, from Carboloy engineers. Order kit for your preliminary testing today. Check new Grade 608 Chrome Carbide against your requirements now. See properties and test results below.

### Properties and test results of Grade 608

THE OUTSTANDING properties of Grade 608 Cemented Chrome Carbide promise to open new cost-saving applications throughout industry. You may wish to expedite your initial test appraisals by starting with the above test kit now, pending larger quantities or supplies as production facilities expand.

### Physical Properties (Grade 608)

Composition: 83 % CR<sub>3</sub> C<sub>2</sub> 2% WC 15% Ni

Hardness (Nominal): 88 Rockwell "A"

Density (Nominal): 7.0 gms/cm<sup>3</sup> (Slightly lighter than S.A.E. 1095 steel)

Transverse Rupture Strength: 100,000 P.S.I.

Coefficient of Thermal Expansion: 6.4 in range of 70° —1292°F.

Relative Abrasive Resistance: Dry Al Oxide-58.0

### Test Results

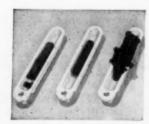
Salt spray. After subjection to a 30% salt spray for 750 hours, Grade 608 still retained its metallic lustre.

**Sulphuric acid.** With sulphuric acid as the corrosive agent, Grade 608 showed about 30 times the resistance of 18-8 stainless steel, and 3 times the resistance of tungsten carbides.

Nitric acid. Using nitric acid, the resistance to corrosion was approximately 8 times that of other carbides and twice that of stainless steel.

Steam erosion. Tests indicate a resistance to steam erosion approximately 60 times that of conventional carbides.

Lactic or citric acid. Grade 608 was practically inert under all conditions when exposed to lactic or citric acid.



OXIDATION RESISTANCE. (Left to right.) Samples of 18-8 stainless steel. Grade 608 Chrome Carbide and tungsten carbide after exposure in air at 1850°F. for 24 hours. All were originally identical in shape and size. Grade 608 Chrome Carbide appears to be virtually completely resistant to oxidation at all temperatures up to 1000°C. (1832°F.). Samples subjected to 1850°F. were only slightly discolored.

# CEMENTED CHROME CARBIDE abrasion, erosion

New Grade 608 Carboloy Cemented Chrome Carbide, first of the new Series 600 Chrome Carbides, with chromium as principal ingredient, gives high resistance to corrosion or erosion, combined with good abrasion resistance. Opens new areas for carbide benefits, new product design. First sample test quantities now available; production quantities soon. For properties, sample kit, suggested uses of this great new Carboloy created-metal, see below.

Now available for your product designers, process engineers and metallurgists . . . sample test quantities of Carboloy Grade 608 Cemented Chrome Carbide, first in an entirely new series of metallic carbides

Series 600 Chrome Carbides contain chromium as the principal ingredient. They are cobalt-free and practically tungsten-free. They feature high resistance to corrosion or erosion, combined with good abrasion resistance.

Field tests already point up exciting new areas where Series 600 will bring new cuts in costs, new highs in performance. Undoubtedly, your field, your product may benefit, too. Use sample kit to start your preliminary metallurgical and chemical tests of Grade 608 today.

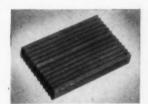
### An expansion of carbides

Series 600 Chrome Carbides are light in weight, completely nonmagnetic and have a coefficient of thermal expansion about the same as that of

steel. They are as machineable and as hard as tungsten carbides. They are stable and strong.

Fabricating and finishing techniques are the same as tungsten carbides. A flash plating of nickel makes Chrome Carbide blanks (as sintered or as ground) readily brazable with conventional brazing materials.

Series 600 may overlap a few tungsten carbide applications. But because of their unusual wearproofing properties, their wear- and corrosionresistance, look to Chrome Carbides for famous carbide benefits in many new areas of industrial and product applications. Here may be new op-portunities for you, starting with Grade 608.



GAGE ANVILS currently being GAGE ANVILS currently being made of Grade 608 Chrome Carbide. In gage blocks, ring gages, plug gages and gage anvils, Chrome Carbide has already shown an outstanding ability to resist corrosion and abrasion. Since its coefficient of thermal expansion is about the same as that of steel, readings are not affected by tem-perature variations.



MICROSTRUCTURE of Carboloy Grade 608 Chrome Carbide shows appearance unlike any other metal. Note, particularly, the uniformity and interlock-ing character of the grain structure. Chrome Carbide is lighter in weight than tungsten carbide; facilitates handling and use of solid carbide. It will pay to start your laboratory tests on Chrome Carbides now.

### WHERE CAN YOU USE GRADE 608 CHROME CARBIDE?

Field tests indicate new Series 600 Chrome Carbides offer unusually high resistance to corrosion or erosion combined with good abrasion resistance. For example, the following applications are suggested for Grade 608. Where else can you use Grade 608 Chrome Carbide?

Sheer blades for molten glass Core pins for baking ceramic parts Fishing rod guides

Centrifuge nozzles, separating equipment Bearings where corrosives are

Textile guides

Nozzles and valves: soaps, fats, oils, foods, chemicals, petroleum products, pharmaceuticals, fruit juices

Valve and core pins, die casting

Punches for movie film

For many applications where stainless steel is not sufficiently abrasion-resistant

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polyphosphate for water conditioning and
mild but effective detergency.

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SILICATE OF SODA—Liquid powdered and solid.

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help FLEXSPOUT is a lot more than just another pail closure. It's a powerful you sales tool that will help you sell more of any liquid packaged in steel pails. Every feature of this unique new closure adds up to customer satisfaction and extra sales appeal.

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With plastic screw cap. Protects volatile liquids. Spout retracts for easy stacking.



LEAKPROOF-One-piece molded plastic, sealed directly on pail metal. Stronger than pail itself.



EASY TO OPEN-Without-special tools. Nail, screwdriver or any sharp object does the job.



FLEXIBLE POURING SPOUT-Extends for easy pouring. No muss or fuss . . . because only inside of spout touches liquid.



**RE-SEALS TIGHTLY**—

perproof. It is easily opened with any pointed tool. It has a flexible pouring spout that extends for easy pouring, retracts out of the way for easy stacking and storage. A handy plastic screw cap permits tight, positive re-sealing.

FLEXSPOUT is leakproof and tam-

Over 10,000,000 steel pails have been equipped with FLEXSPOUT during the past year. This better closure can do a better job for you, too. Write us today for further information . . . or fill out the coupon for a free sample.

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Free Sample Please send us... ☐ Brochure

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Note that the operator has not yet placed his left hand on the second air control. Therefore the air ram is locked. BOTH hands must operate BOTH air controls SIMULTANEOUSLY ir order to release the ram.

# UNIFORM SOAP CAKES

Safely and Quickly with "SAFETY" AIR PRESS

Patented U.S.A. and other countries, Houchin Machinery Co., Inc., Manufacturing Licensees.

NEW IMPROVED DESIGN Repeat Orders Testify to Its Success.

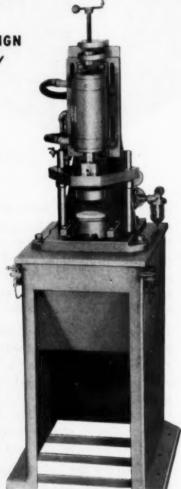
IT'S SAFER because the air ram cannot move until the operator presses down both right and left hand air controls at the same time. Neither hand is free while air ram is in action. There is no foot control. Neither can the operator block off one hand control and operate the press with the other hand.

IT'S FASTER because speed is limited only by skill of the operator—in loading blanks and removing ejected, finished cakes.

IT'S EASIER TO OPERATE because there is no exhausting foot operation. Operator is comfortably seated in front of the machine, working without the fatigue occasioned by old style foot operated presses.

### FEATURES OF THIS NEW MACHINE

- 1. Single or multiple power strokes.
- 2. Any desired period of "dwell" under fingertip control by operator.
- 3. Presses soap cakes and other plastic substances into perfect shapes, with well defined imprints.
- 4. Tough textured soaps are efficiently pressed, the desired ranges of density being attained by simple hand adjustments quickly made by the operator.
- Surface pressures up to 2500 lbs. are available on the "Model A" machine illustrated.
- Automatic lubrication, air cleaner, and other efficiency features assure easy maintenance and long service.
- May be connected with your present compressed air lines, or we can provide a fully automatic electric compressor set.



Model "A" Safety Air Press. Patented.

Write for specifications and quotation.

Houchin soap making machines include every machine required for modern soap manufacture.

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Manufacturers of a complete line of soap making machinery for over three-quarters of a century

# Production SECTION

# Glycerine Recovery

By E. T. Webb

PART I

IGH recoveries of glycerine are the order of the day, and while there may be no difficulty in obtaining a high recoverythe washing process being merely one of repeated dilutions-it is certainly difficult to maintain a high rate of recovery with a high level of efficiency of operation. The soap kettle operator must know exactly what he is doing, and also what he has accomplished. Simply put, the aim must be to obtain a satisfactory recovery of glycerol without the production of any unnecessary spent lyes, and it will be generally agreed that to insure such results, haphazard methods of working will not suffice.

Precise knowledge of what has been accomplished on each change should be known, and the only manner in which this can be achieved is by using some form of quantative soap boiling. It is good to know at each change the exact amounts of materials involved, the total water engaged, the salt concentration of the free liquor, the fatty acid content of the settled curd, and so on. An exact balance for each change should be known, and provided a record is kept of the additions and withdrawals at each operation, there should be no difficulty in maintaining such a balance.

However, it is not the purpose here to describe the manner of carrying out quantative soap making, as such, as this has been fully written up elsewhere. (Wigner & Govan). What is intended is to illustrate, by means of example, how the glycerol recovery efficiency, which includes the percentage recovery and the glycerol concentration of the spent lyes made, can be influenced, and the exact extent to which they can be influenced, by certain variables.

The ground to be covered is given immediately below, and it is

hoped that the examples, with the attached notes, will assist in giving a better appreciation of the problems concerning efficient glycerol recovery. It will be found that each point to be dealt with may have an important bearing on the results obtained. It may also be mentioned that the importance of the points applies equally to soap boiling in the ordinary way and to soap boiling controlled quantatively.

The following points will be considered in this series:

1. Examples 1 and 2, also 3 and 4, will relate to the importance of good graining at each change. It will be shown that when all other factors remain equal, a soap grained to a 53.0 percent fatty acid curd on each change will yield 5.0 percent less glycerol than if it had been grained to a 58.0 percent curd.

2. Is it better to use a larger number of small washes or a small number of large ones? Comparisons

### Example 1

	Total	Anhydrous Soap	Salt, etc.	Total Water	Glycero
1st Change					
50% f.a. soap	191.00	104.00	3.50	75.00	8.50
Brine	49.19	****	7.00	42.19	***
	Contents	of kettle aft	er settli	ng	
53% f.a. curd	180.19	104.00	3.90	67.40	4.89
Spent lye	60.00	****	6.60	49.79	3.61
2nd Change					
53% f.a. curd	180.19	104.00	3.90	67.40	4.89
Brine	60.00		6.60	53.40	
	Contents	of kettle aft	er settli	ng	
53% f.a. curd	180.19	104.00	3.90	69.48	2.81
Spent lye	60.00		6.60	51.32	2.08
3rd Change					
53% f.a. curd	180.19	104.00	3.90	69.48	2.81
Brine	60.00	****	6.60	53.40	***
	Contents	of kettle aft	er settli	ng	
53% f.a. curd	180.19	104.00	3.90	70.67	1.62
Spent lye	60.00	****	6.60	52.21	1.19
Summary					
% Glycerol in fa	t charge.				8.50
Spent lye made		*********			180.00
Ratio of fat sapo					
% Glycerol in sp					
% Glycerol reco					
% fatty acids in					

### Example 2

Anhydrous Salt.

	Total	Soap	etc.	Water	Glycerol
1st Change					
50% f.a. soap:	191.00	104.00	3.50	75.00	8.50
Brine	33.66	****	5.29	28.37	***
	Contents	of kettle o	rfter settli	ng	
58% f.a. curd	164.66	104.00	2.19	54.03	4.44
Spent lye	60.00	****	6.60	49.34	4.06
2nd Change					
58% f.a. curd	164.66	104.00	2.19	54.03	4.44
Brine	60.00		6.60	53.40	***
	Contents	of kettle o	riter settli	ng	
58% f.a. curd	164.66	104.00	2.19	56.15	2.32
Spent lye	60.00		6.60	51.28	2.12
3rd Change					
58% f.a. curd	164.66	104.00	2.19	56.15	2.32
Brine	60.00		6.60	53.40	***
	Contents	of kettle a	dter settli	ng	
58% f.a. curd	164.66	104.00	2.19	57.26	1.21
Spent lye	60.00	****	6.60	52.29	1.11
Summary					
% Glycerol in fo					
Spent lye made	******				180.00
Ratio of fat sapo					
% Glycerol in sp					
% Glycerol reco	overed				
% fatty acids in	settled cu	ard at each	change		58.00



W. W. Thompson (right), president, Hydrite Chemical Co., Inc., inspects packaging operation.

### BULLETIN BOARD

### Caustic Soda:

Some cleaning compound manufacturers are finding that powdered coustic has some advantages over flake. Since other ingredients are powdered or fine-granular, a dustsuppressing oil is needed anyway; and the powdered coustic does not tend to segregate. Ask for trial quantity.

### Soda Ash:

Supply of soda ash is adequate for the present; and we're expanding production to meet growing needs of old and new customers.

### Pluronics\*:

You'll want to look into this first 100%-active flake nonionic ever commercially available. It's another Wyandotte first. Samples and literature available.

# "We rely on Kreelon CD for our own formulations—recommend it to customers!"

"We find new, improved Wyandotte Kreelon is being well received by many of our customers," reports W. W. Thompson, president, Hydrite Chemical Co., Inc., distributors and manufacturers, Milwaukee, Wisconsin.

"They like its better solubility, good sudsing characteristics, clear color and uniformity.

"After thorough tests, one of our big customers recently switched over all his formulas to Kreelon CD with excellent results.

"We strongly recommend this practice.

"In fact, we use Kreelon CD in our own formulations. It offers the advantages of both a quality detergent and a detergent-promoter in one product, eliminates a difficult mixing operation, lowers over-all cleaning costs, gives 20% to 70% improvement in soil removal and whiteness retention. It's easy on the hands, too."

Have you investigated the improved characteristics of WyanDOTTE KREELON\* CD? Ask your 
jobber for samples and data, or 
write for a copy of our new 28-page 
KREELON book. It's packed with 
helpful information. Wyandotte 
Chemicals Corporation, Wyandotte, 
Mich. Offices in Principal Cities.



FOR SOAPS AND DETERGENTS

### Example 3

	Total	Anhydrous Soap	Salt, etc.	Total Water	Glycerol
1st Change					
58% f.a. soap	191.00	104.00	3.50	75.00	8.50
Brine	25.19		4.36	20.83	
	Contents	of kettle o	fter settli	ng	
53% f.a. curd	180.19	104.00	3.90	66.40	5.89
Spent lye	36.00	* * * *	3.96	29.43	2.61
2nd Change					
53% f.a. curd	180.19	104.00	3.90	66.40	5.89
Brine	36.00		3.96	32.04	***
	Contents	of kettle a	dter settli	ng	
53% f.a. curd	180.19	104.00	3.90	68.21	4.08
Spent lye	36.00		3.96	30.23	1.81
3rd Change					
53% f.a. curd	180.19	104.00	3.90	68.21	4.08
Brine	36.00		3.96	32.04	
	Contents	of kettle a	fter settli	ng	
53% f.a. curd	180.19	104.00	3.90	69.46	2.83
Spent lye	36.00	****	3.96	30.79	1.25
4th Change					
53% f.a. curd	180.19	104.00	3.90	69.46	2.83
Brine	36.00		3.96	32.04	
		of kettle a	fter settlin	ng	
53% f.a. curd		104.00	3.90	70.33	1.96
Spent lye	36.00		3.96	32.04	0.87
5th Change					
53% f.a. curd	180.19	104.00	3.90	70.33	1.96
Brine	36.00	****	3.96	32.04	
	Contents	of kettle a	iter settlir	ng pe	
53% f.a. curd	180.19	104.00	3.90	70.93	1.36
Spent lye	36.00	****	3.96	31.44	0.60
Summary					
% Glycerol in fat	charge.		*****		8.50
Spent lye made.					180.00
Ratio of fat sapor	nified to ly	ye made			.1.0:1.80
% Glycerol in sp	ent lye				3.97
% Glycerol rece					
% fatty acids in					

### Example 5

	Total	Anhydrous Soαp	Salt, etc.	Total Water	Glycerol
1st Change					
50% f.a. soap	191.00	104.00	3.50	75.00	8.50
Brine	33.66		5.29	28.37	***
	Contents	of kettle a	iter settli	ng	
58% f.a. curd	164.66	104.00	2.19	54.03	4.44
Spent lye	60.00		6.60	49.34	4.06
2nd Change					
58% f.g. curd	164.66	104.00	2.19	54.03	4.44
Brine			5.50	44.50	
		of kettle at			
58% f.a. curd		104.00	2.19	55.95	2.52
Spent lye			5.50	42.58	1.92
			0.00	*81.00	2.00
3rd Change					
58% f.a. curd		104.00	2.19	55.95	2.52
Brine	30.00	****	3.30	26.70	
		of kettle of			
58% f.a. curd		104.00	2.19	56.74	1.73
Spent lye	30.00		3.30	25.91	0.79
4th Change					
58% f.a. curd	164.66	104.00	2.19	56.74	1.73
Brine	20.00		2.20	19.80	
	Contents	of kettle of	ter settlir	g	
58% f.g. curd	164.66	104.00	2.19	57.14	1.33
Spent lye	20.00		2.20	17.40	0.40
5th Change	10400	104.00	0.10	6714	1.00
58% f.a. curd	164.66	104.00	2.19	57.14	1.33
Brine	20.00		2.20	17.80	* * *
58% f.a. curd		104.00	2.19	57.45	1.02
Spent lye	20.00	****	2.20	17.49	0.31
Summary					
% Glycerol in fa					
Spent lye made.					
Ratio of fat sapor					
% Glycerol in sp					
% Glycerol reco					
% fatty acids in a	ettled cur	d at each ch	ange		58.00

### Example 4

		•			
	Total	Anhydrous Soap	Salt, etc.	Total Water	Glycerol
1st Change					
50% f.a. soap	191.00	104.00	3.50	75.00	8.50
B.ine			2.65	7.01	
		of kettle			
58% f.a. curd	164.66	104.00	2.19	52.97	5.50
Spent lye	36.00		3.96	29.04	3.00
2nd Change					
58% f.a. curd	164.66	104.00	2.19	52.97	5.50
Brine	36.00		3.96	32.04	
		of kettle		ng	
58% f.g. curd		104.00	2.19	54.92	3.55
Spent lye		****	3.96	30.09	1.95
3rd Change					
58% f.a. curd	164.66	104.00	2.19	54.92	3.55
Brine			3.96		
		of kettle			
58% f.a. curd			2.19		2.29
Spent lye			3.96		1.26
about the title			0.00		
4th Change					
58% f.a. curd	164.66	104.00	2.19	56.18	2.29
Brine	36.00		3.96	32.04	
	Contents	of kettle o	fter settli:	ng	
58% f.a. curd	164.66	104.00	2.19	56.99	1.48
Spent lye	36.00		3.96	31.23	0.81
5th Change					
58% f.a. curd	164.66	104.00	2.19	56.99	1.48
Brine		104.00	3.96	32.04	1.40
Dillio		of kettle o			
58% f.a. curd		104.00	219		0.96
Spent lye	36.00	104.00	3.96	31.52	0.52
	30.00	****	0.50	31.36	0.02
Summary % Glycerol in fa	d abanca				8.50
Count less made	n charge.				100.00
Spent lye made Ratio of fat sapo	-:6- 1 1				1 0.1 00
% Glycerol in sp					
% Glycerol reco					
% fatty acids in	settled Cu	na ai each	cnange		58.00

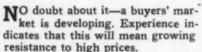
### Example 6

	Anhydrous Salt. Total				
	Total	Soap	etc.	Water	Glycero
1st Change	A CONTRACTOR OF THE CONTRACTOR				
58% f.a. soap	191.00	104.00	3.50	75.00	8.50
Brine	13.66		3.09	10.57	
	Contents	of kettle a	fter settli	ng	
58% f.a. curd	164.66	104.00	2.19	53.18	5.29
Spent lye	40.00		4.40	32.39	3.21
2nd Change					
58% f.a. curd	164.66	104.00	2.19	53.18	5.29
Brine	20.00		2.20	17.80	
	Contents	of kettle a	iter settlir	ng	
58% f.a. curd	164.66	104.00	2.19	54.41	4.06
Spent lye	20.00	****	2.20	16.57	1.23
3rd Change					
58% f.a. curd		104.00	2.19	54.41	4.06
Brine	20.00		2.20	17.80	
		of kettle a			
58% f.a. curd	164.66	104.00	2.19	55.36	3.11
Spent lye	20.00	****	2.20	16.85	0.95
4th Change			0.10	55.00	0.11
58% f.a. curd	164.66	104.00	2.19	55.36	3.11
Brine	40.00	****	4.40	35.60	
		of kettle at			
	164.66	104.00	2.19	56.54	1.93
Spent lye	40.00	****	4.40	34.42	1.18
5th Change					
8% f.a. curd	164.66	104.00	2.19	56.54	1.93
Brine	60.00		6.60	53.40	
	Contents	of kettle at	ter settlin	ıg	
58% f.a. curd	164.66	104.00	2.19	57.46	1.01
Spent lye	60.00	****	6.60	52.48	0.92
Summary					
% Glycerol in fa	charge	********	******		8.50
Spent lye made.					
Ratio of fat sapor					
% Glycerol in sp					
% Glycerol recov					
% fatty acids in a	and baltte				58.00

If there's a weak link in your production chain

- replace it NO





resistance to high prices. That makes it essential for manufacturers to

Send for complete information regarding this and other Lehmann Soap Finishing Machines. replace high-cost, obsolete production machines with more efficient units, to keep costs down. Installation of Lehmann Soap Finishing Machines can be an important step in this direction. Such units as Lehmann Amalgamators, Roughing Mills, Plodders, and Five Roll Finishing Mills are a major factor in reducing production costs.

Examine your soap finishing machines now. If any are obsolete or badly worn, replace them as soon as possible. Every improvement in production efficiency you can make at this time is vitally important.

Yes-it will bear repeating-the replacement of weak links in your production chain is a better investment today than ever before.



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of examples 1 and 2 and 3 and 4 will show that with the same total volume of wash liquor it is much more profitable to use more small washes. A soap given five changes, as opposed to three, even when the same total of spent lye is made, will yield almost 4.0 percent more glycerol, and of course, the glycerol content of the spent lye made will be higher.

3. Examples 5 and 6 are included to show the effect of varying the volume of wash used on each change, when the total volume of wash liquor used remains the same. It will be shown that the best recovery is offered when the volume of wash liquor is kept more or less constant at each change, although the effect on recovery is not very marked should the volume of wash be varied from change to change.

4. What effect does the glycerol residue in recovered salt have upon overall glycerol recovery? And is the glycerol contained in the salt necessarily lost? Example 7 will show

that the glycerol contained in the salt can have a marked effect on the recovery performance, but that all of it may be recovered, although this can only be achieved by increasing the volume of wash liquor used. It will be shown that a 5.0 percent glycerol residue in recovered salt can reduce the overall recovery by as much as 5.0 percent when the same total volume of wash liquor is used. This, of course, is the result when compared with the use of glycerol free salt. On the other hand, the loss of 5.0 percent in recovery can be avoided by using 22.0 percent more wash liquor. Viewed from any angle the presence of an exaggerated amount of glycerol in the recovered salt is highly undesirable.

(To Be Continued)

#### Van Dyk Price List

Van Dyk & Co., Belleville 9, N. J., recently issued a list of current prices for its line of aromatic chemicals.

#### Example 7

	Total	Anhydrous Soap	Salt, etc.	Total Water	Glycerol
1st Change					
50% f.a. soap	191.00	104.00	3.50	75.00	8.50
Brine	9.66	****	2.65	6.70	0.31
		of kettle a			0.01
58% f.a. curd	164.66	104.00	2.19	52.78	5.69
Spent lye	36.00		3.96	28.92	3.12
2nd Change					
58% f.a. curd	164.66	104.00	2.19	52.78	5.69
Brine	36.00		3.96	31.84	0.20
	Contents	of kettle a			
58% f.g. curd	164.66	104.00	2.19	54.66	3.81
Spent lye	36.00		3.96	29.96	2.08
3rd Change					
58% f.a. curd	164.66	104.00	2.19	54.66	3.81
Brine	36.00		3.96	31.84	0.20
	Contents	of kettle a	fter settli	na	
58% f.g. curd		104.00	2.19	55.81	2.66
Spent lye			3.96	30.69	1.35
4th Change					
58% f.g. curd	164.66	104.00	2.19	55.81	2.66
Brine		****	3.96	31.84	0.20
		of kettle a			0100
58% f.g. curd		104.00	2.19	56.62	1.85
Spent lye		****	3.96	31.03	1.01
5th Change					
58% f.g. curd	164.66	104.00	2.19	56.62	1.85
Brine	36.00		3.96	31.84	0.20
		of kettle a	fter settlin	ng	
58% f.g. curd			2.19	57.14	1.33
Spent lye			3.96	31.32	0.72
Summary					
% Glycerol in fa					
Spent lye made					
Ratio of fat sapor					
% Glycerol in sp					
% Glycerol reco					
% fatty acids in	settled cur	rd at each c	hange		58.00

#### Essential Oils, Vol. VI

The Essential Oils, Volume VI, by Ernest Guenther, Ph.D. Published by D. Van Nostrand Co., New York, 1951. Cloth, 9<sup>1</sup>/<sub>4</sub>" x 6<sup>1</sup>/<sub>4</sub>", 481 pages, price \$9.75.

This recently published volume completes the standard series on the essential oils by Dr. Guenther, who is . vice-president and technical director of Fritzsche Brothers, Inc., New York. Like the third, fourth and fifth volumes it is composed of monographs describing individual oils. The oils are grouped according to the plant families from which they are derived. Oil of verbena, labdanum, orris, ambrette seed and oak moss are included. There is a large section devoted to the pine oils, and an almost equally long monograph concerned with oils of the plant family cupressaceae, which takes in cedar, thuya, and cypress.

A table at the end of the volume shows the taxonomic classification of all the essential oils described in the whole series.

The author tells us that the completion of *The Essential Oils* has required more than twenty years of field investigations throughout the oil-producing regions of the world, and ten years of literature research, editing and writing. The work was originally planned to comprise three volumes, whereas it has now grown to six.

#### **New Sealing Machine**

A new automatic jaw sealing machine with vacuum labeling attachment was announced recently by Amsco Packaging Machinery Inc., Long Island City, N. Y. The new "Amsco Hi-Speed" unit seals and labels bags of such heat sealable materials as cellophane, polyethylene, Pliofilm, heat-sealable papers, glassines, foils, and plastic films. Labels with face widths from 3" to 7" are accommodated. They can be folded flush back-to-back, or shorter back and longer front for generous label design message. Two sealing jaws, each equipped with its own cartridge type hermetically sealed heating element provide maxim heat penetration.

# DRYMET\*

### THE ECONOMICAL DETERGENT SILICATE

Cowles DRYMET, anhydrous sodium metasilicate, is the most highly concentrated form of sodium metasilicate available. One pound of DRYMET is equivalent to 1.6 lbs. of sodium metasilicate pentahydrate. DRYMET contains no water of crystallization. It is more economical to use, on the basis of both Na<sub>2</sub>O (alkalinity) and SiO<sub>2</sub> (silicate), than any other type of hydrated or anhydrous detergent silicate, either compounded or by itself.

IS USED IN COMPOUNDING SUCH PRODUCTS AS:

- 1. Floor Cleaners
- 2. Laundry Products
- 3. Metal Cleaners
- 4. Dairy Cleaners
- 5. Dishwashing Compounds
- 6. General Purpose Cleaners
- 7. Soap Builders
- 8. Paint Cleaners
- 9. Paper De-Inking Compounds
- 10. Household Cleaners

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### DRYMET

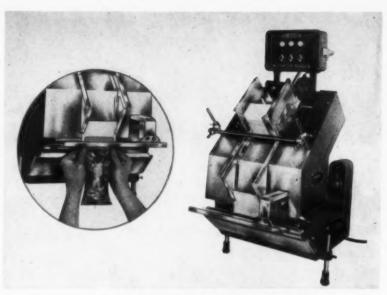
HAS THE FOLLOWING ADVANTAGES:

- 1. Reinforces "wetting-out" action
- 2. Lowers surface tension of water
- 3. Resists rapid exhaustion of cleaning solution
- 4. Improves and stabilizes emulsifying and deflocculating power of solution
- 5. Resists changes in pH because it is a "buffered"
- 6. Inhibits corrosion



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New Automatic Jaw Sealing Machine of Amsco Packaging Machinery, Inc.

Pressure is variable and controlled by spring-mounted movable top jaw, assuring perfect seal throughout.

Heat is controlled by a dialtype thermostat, which is adjustable to the requirement of the particular label and film. Tri-pod type mounting permits angling of the sealing jaws for maximum comfort and efficiency. Bags are fed into the machine in a vertical or near-vertical position to avoid spillage from the open ends of the bags. Dimensions of the unit are 34" x 19" x 27". It operates on 110 volts A.C. Other electrical specifications can be accommodated.

#### **German Detergent Book**

Organische und Anorganische Wasch-, Bleich- und Reinigungsmittel (Organic and Inorganic Detergents, Bleaching and Cleansing Agents) by C. Luettgen, 1952. Published by Strassenbau Chemie und Technik Verlagsgesellschaft m.b.H., Heidelberg, Germany, 365 pages, price DM 48 (approximately \$10).

The bulk of this book consists of approximately 1,100 abstracts of patent specifications relating to detergent substances. A few pages deal with modern methods of the washing of fabrics and the cleansing of the skin. Some descriptive matter on synthetic detergents and on other types of detergents is included.

#### Tenn. Aldehyde Bulletin

Various aldehydes are described in a bulletin recently released by Tennessee Eastman Co., Kingsport, Tenn. It includes specifications and indications of uses for acetaldehyde and crotonaldehyde. Among many other applications acetaldehyde is a source of chloral, which in turn is an intermediate for the manufacture of DDT. Crotonaldehyde's uses include that as a raw material for various insecticides.

#### **Book on Surface Films**

The Physical Chemistry of Surface Films by W. D. Harkins. Published by Reinhold Publishing Corp., New York, 1952. Cloth, 9"x6", 413 pages, price \$10.00.

This book by the late Professor Harkins is a guide to advances in emulsion technology, including emulsion polymerization, of interest to any scientist whose work involves an understanding of detergency, films, foams, or any type of heterogeneous system. Its main divisions are: nature and energetics of surfaces; films on liquids; films on solids; properties of soap solutions; mechanism of emulsion polymerization; the role of the electric double layer in the behavior of lyophobic colloids. The last chapter on the electric layer is contributed by

E. J. W. Verwey. Literature references follow each chapter. At the end of the book is a chronologically arranged list of publications by Professor Harkins, covering the period from 1907 to 1950.

#### **New Givaudan Catalog**

Givaudan - Delawanna, Inc., New York, recently released a new 86-page catalog of perfume and raw materials, entitled "Fragrance is Your Business and Ours." The catalog is divided into sections covering different groups of products such as aromatics, specialties, basic materials, etc. Descriptions of products and information covering applications is included, as are prices except where they are too changeable. The book contains a section dealing with perfume problems of such products as creams, lotions, shampoos, bath preparations, etc.

### Temperature Control Book

The Measurement and Control of Temperatures in Industry by R. Royds, Chemical Publishing Co., New York, 1952. 116 illustrations, price \$5.00.

Latest developments in temperature measurement and control in all industries interested in maintaining highest possible thermal efficiency are covered. Methods and equipment available for measurement of temperatures in each particular range are discussed. Standardization and automatic control of temperatures in industry are reviewed in great detail.

#### Consultant's Role

The Consulting Chemist and Chemical Engineer in a World Economy, designed and edited by A. B. Bowers, published by Association of Consulting Chemists and Chemical Engineers, New York. Paper, 32 pages, price \$1.00.

This book outlines the type of services provided by the consultant, and the fields in which he functions. It tells how his services may be procured through the Association's clearing house. The final chapter illustrates the part of the consultant in various branches of industry on hand by case histories.



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- 4. Filtrol adsorbents give the best color stability.
- 5. Filtrol adsorbents possess the fastest filtration rate.
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### PRODUCTION Clinic

#### By E. G. Thomssen, Ph.D.

VAPORATORS are not used very widely by smaller sanitary chemical manufacturers. This industry is more interested in the use of end products in which evaporation is a processing detail, rather than in the appliance itself. Soap is widely used as a sanitary chemical and soapers who saponify a large enough volume of neutral fats and oils require evaporators to recover the byproduct, glycerine. Most firms making soap for industrial sanitation employ fatty acids from which the glycerine has been removed during their processing, thus simplifying the soap-making procedure. Fatty acids, too, are refined by vacuum distillation, a process that simulates vacuum concentration in an evaporator. Other raw materials, such as caustic soda, caustic potash and some of the phosphates, are concentrated and crystallized through evaporation. But the sanitary chemical manufacturer is interested in the end product not the processing.

Concentration of liquids is carried out almost entirely with evaporators under vacuum. In very few cases do we find atmospheric concentrators used. This latter method is too costly and too uncertain.

Since soap is a much used industrial sanitary chemical and crude glycerine recovery as a by-product is a part of soap making procedure, a brief summary of the recovery method used is of interest.

The glycerine contained in such neutral fats and oils, as tallow, coconut oil or soybean oil, may be split off by several means. The most common is to saponify the fat or oil in a soap kettle and salt out the soap from the spent lye or liquor, developed in the soap-making process. This settles out a liquid portion which contains salt and glycerine dissolved in water. Other methods of fat or oil cleavage, like the Twitchell process, which uses a reagent or saponifier; autoclave splitting which depends

upon pressure, the addition of water and usually lime or acid; hydrolysis with chemicals other than lime or



DR. THOMSSEN

acid; and saponification with lipolytic enzymes. These latter direct splitting methods give fatty acids and glycerine solutions of more concentration than when soap is made by the first or common method which produces soda soap and dilute glycerine lyes. As stated above, glycerine cannot be reclaimed from potash soaps made from neutral fats.

The evaporators for concentrating salt free, glycerine-containing, spent lyes or glycerine solutions from direct cleavage differ mainly in the addition of a salt filter or box to evaporators which recover both salt and glycerine when spent lyes are evaporated. These heavy cast iron evaporators operate under vacuum. This requires a vacuum pump and an ample supply of cold water. Heat is applied from a calandria, constructed so as to assure circulation of the liquid in one direction. The vacuum is maintained by the wet system. Catchalls and entrainment separators are provided to prevent any losses due to boiling over or foaming. Single or double evaporators are used. Double effect evaporators economize on fuel consumption because the steam vapor

from the first effect is used to heat the calandria of the second effect. It is possible to reverse the effects or boiling chambers.

Evaporators are made in different capacities as to the amount of water boiled off per hour. Since the installations are costly, smaller soap manufacturers are wise to use fatty acids to make their soap products, unless their consumption of fats and oils is sufficiently large to warrant the expenditure.

#### **Dust Collectors**

DRY mixing operations are very common in the making of sanitary chemicals. While some effort is made by many manufacturers to control dust, it is not uncommon to note many installations where dust, with its untidy and deleterious results, is permitted to rise and settle at random. Dust collection is not only a problem of gathering it when it arises but also one of reducing the quantity at its source or preventing it entirely.

Various procedures are employed in dust collecting systems. The most common is by the use of a cyclone which is about a 70 per cent efficient. The dust laden air is conducted to the cyclone by a suction fan. Cyclones then whirl out the dust from the air in a conical shaped vessel that spins it and gradually slows it down and drops it into a collecting chamber. To achieve full efficiency with cyclones, a dust house or filter type dust collector is necessary. These consist of rectangular hollow frames or fins covered with fine, porous cloth and enclosed in a dust tight compartment. Rapping devices to free the dust filtering cloth from accumulated particles which often choke up the aperatures between the fibers are advisable. Synthetic fibers are preferable to the old type cotton cloths since they are stronger and may be cleaned more readily.

As this means of collecting and controlling dust is the most satisfactory we will not enlarge upon this type equipment except to point out that any dust collecting system should be of sufficient capacity to take care of dust wherever it arises. It is far

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90% distills within range of 7°C., which betters Pharmacopoeia requirements.

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better to have greater capacity than to skimp with undersized installations.

To those who wish to investigate dust collection systems more fully we merely mention other methods. These include the electrical precipitation method, known as the Lodge-Cottrell process; the diversion method, whereby the direction of the dust laden air stream is diverted by the installation of small baffles built into the air ducts that knock out the dust and drop it into a chute located at right angles to the air duct; and the wet method, in which the dusty air is forced through either a shallow layer of water or into a chamber into which a fine spray is atomized to remove and wash out the dust. This last method, except for handling of irritating dust is not too satisfactory. It often requires a large volume of water.

(To be continued)

#### Syntron Applications

A RECENT flyer published by the Syntron Co., Homer City, Pa., describes certain appliances of interest. Among these are hopper level switches, feeders for bulk materials, vibratory packers and electric hammers.

The hopper level switches serve the dual purpose of maintaining conetant full and empty levels of fine or coarse powdered materials in bins and hoppers, as well as batching such items into volume hoppers automatically.

The feeders include vibratory, gravimetric, batch-weigh, spiral and screening feeders. By the use of a suitable feeder any reasonable result may be attained in feeding very small quantities to tons per hour to the exact weight desired. The feeders are claimed to be accurate, simple to control and selective.

The vibratory packers and hydraulic jolters are useful for the effective filling and packing into drums or barrels of particularly light weight, powdered products. They eliminate the slower manual pounding, bumping and jarring procedures.

Electro-magnetic hammers are indispensable in concrete buildings.

One large job, where drilling, cutting or chipping concrete or brick work is necessary, pays for the device in the saving of time and greater speed in completing the work.

#### Steel Shelving

A CATALOG on steel shelving is being distributed by Precision Equipment Co., Chicago. This is a handy brochure to file for ready reference. It not only describes numerous types of steel shelving, but includes many types of bins, cabinets, floor maintenance equipment, tape dispensers, fire extinguishers and work benches. This and similar equipment are frequently "musts" in many plants.

#### Anti-Caking Silica Agents

Davidson CHEMICAL CO., Baltimore, is now offering synthetic silicas of fine size that may be used in powdered detergents, powdered insecticides, etc. These silicas are double acting. They coat other particles with a non-caking coat and absorb the moisture which accelerates caking. Additional information is available upon request to the company. It is advisable to give details as to what the type of product they will be used in, when writing to the company.

Westvaco Chemical Division of Food Machinery & Chemical Corporation, New York, offers "Magnesol," brand of magnesium silicate to produce non-caking, free-flowing powders. It also may be used in powdered insecticides, detergents or similar products to prevent agglomeration in bags or drums. Other applications are as a decolorizing, deodorizing and purifying agent without distillation, for solvents, fats, oils and waxes. Technical data and a test sample are available upon request.

#### **Corrosion Protection**

ings are handled by the Protective Coatings Division, of the Pittsbugh Coke and Chemical Co., Pittsburgh, Pa. The coatings come in four different formulations to control various types of corrosion. They are derived from coal tar pitch and the company assures good corrosion pro-

tection at lower costs. Most mineral acids, alkalis and corrosive vapors are resisted by their durable protection. The application is quite simple.

#### **Proportioning Pumps**

A COMPLETE line of plunger type and diaphragm type of chemical proportioning pumps are offered by per cent Proportioneers, Inc., Providence 1, R. I. They come in sizes suitable for pilot plant, laboratory, or large batch production. If desired control panels, chemical tanks and dissolvers can also be furnished. The company offers descriptive bulletins as well as layout and installation suggestions if this is desired.

#### Respiratory Device List

A revised circular on respiratory devices for protection against inhalation hazards of dusts, mists, and low vapor concentrations of certain insecticides was issued recently by the Bureau of Entomology and Plant Quar antine, U. S. Department of Agriculture. Respirator units found to afford protection against dusts, mists, and low vapor concentrations of parathion, aldrin, dieldrin, chlordane, EPN (Oethyl O-p-nitrophenyl benzene-thiophosphonate), and nicotine, are listed with their sources of supply. The circular supplies information on field use and care of respirators, and lists certain uses for which these respirators are not advised.

#### **New MCA Safety Data Sheet**

Unloading of flammable liquids from tank cars is the subject of revised manual sheet TC-4, recently published by Manufacturing Chemists Association, Washington, D. C.

It contains information for consignees on the safe handling of such materials, describes in detail safety precautions which should be observed by personnel preparing various types of tank cars for unloading, and shows pertinent regulations of the Interstate Commerce Commission as well as various state and local requirements. The manual may be ordered from the association at Woodward Building, Fifteenth and H Streets, Washington 5, D. C. Individual copies are 15 cents.

LS

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# PROCTOR Automatic FLAKE SOAP SYSTEM

With the Proctor automatic flake soap system it is possible to process soap for final use as bars, flakes or powder... and to process many different formulae over a wide range of moisture content. This is possible because flexibility is engineered into every Proctor system.

Temperatures and humidity within the dryer and the speed of the conveyors carrying soap through the dryer may be varied to meet the requirements of different formulae or the end form which the soap is to take. Always the result is the same—dependably uniform finished soap.

The flexibility that is engineered into this system makes a decided contribution to profit—for it assures you uniform results over a wide range of production requirements.

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# Products and PROCESSES

#### Phosphates in Dental Polish

A stabilized dicalcium phosphate abrasive composition comprising a powdered mixture of 70-90 parts dicalcium phosphate (dihydrate), 15-5 parts tricalcium phosphate, and 15-5 parts trimagesium phosphate for use as a dentifrice polishing composition is described in U. S. patent 2,601,238.

#### **New Dutch Insecticide**

Compounds which include as an active ingredient water soluble trialkyl tin chlorides, dissolved in water or in an organic solvent, such as kerosene, have strong insecticidal and ovicidal properties, and may be used in solutions of 0.5 per cent together with other contact insecticides (DDT, pyrethrum) or fungicides. Dutch patent 68,578.

#### Hormone-Containing Soap

Soap for cleaning and treating the body and containing a small amount, for example 20 to 100 mg per kilogram of soap, of natural or synthetic male sex hormones is the subject of British patent 662393. It is claimed that soaps so compounded have a refreshing action said to stimulate the general activity of the body and increase the feeling of comfort. The hormones can be mixed with pre-dried chips of a neutral basic soap, prepared in the usual manner in a kneading apparatus, and the mixture then milled and shaped in the usual way into cakes of convenient size.

#### **New Dentifrices**

The following are some formulas for modern dentifrices:

#### Tooth-paste (foaming)

	Per
	Cent
Calc. carb. praec.	
(Lipsa)	
Tricalcium phosphat	
Distilled water	
Sorbit solution (sor	
(karion liquid)	
Glycerine	
Moussant L. L	
Tragacanth	 1.2
Nipagin M	 0.2

Calcium chloride 0.6 Perfume essence 1.0
Tooth-paste
Per Cent
Calc. carb. albiss. leviss. (Lipsa). 45 Texapon
(karion liquid) 15.5
Cohäsal I (H)
Perfume oil 1.3

#### Tooth-paste

	Cent
Dicalcium phosphate extra fine	. 56
Sorbit solution	
Perfume oil	
Tragacanth first grade	
Alcohol 95 per cent	
Distilled water	. 23

#### Tooth-paste

				Cent
Precipitated chalk,				
Sapolan Sch. & Co.				
Sorbit solution				
Castor oil, first gr	ade	*****	 * *	1
Saccharine solution			 	0.1
Perfume oil				1.2
Nipagin M				0.2
Distilled water			 	17.5

H. Fuehrer, Alchimist, June 1952, p. 147.

#### **Noncorrosive Metal Cleaner**

A noncorrosive metal cleaning composition consisting of the following ingredients in substantially these proportions: trichlorethylene (stabilized), 100 cc; triethanolamine oleate, 2 grams; monoethanolamine oleate, 6 grams; sodium oleate, 1 gram; water, 11 cc; and benzyl thiocyanate, 3 grams, is covered by U. S. patent 2,599,729.

#### Disinfectant Wax Tested

Incorporation of a germicidal agent in floor waxes has been tried for some time. By the law of gravity all air borne germs must eventually sink to the floor of the sick room. This fact lends importance to such products. The treated floor wax of Feldten Nachfolger, Hamburg-Altona, trade-named "Tb-Antin," was tested.

The antibacterial additives were found to be unimpaired in their effectiveness by the manufacturing process. O. Preuss, *Tuberkulosearzt* 4, 730, 1950.

#### Disinfectants in Soaps

The testing of disinfectant soaps is the subject of an article by Harry Pritchard in Manufacturing Chemist for June 1952. The author makes a case for disinfectant soap, and defines disinfectants suitable for use in soap. For incorporation in soap a disinfectant must be able to retain a large part of its activity in the presence of soap and to be bland and non-toxic to the skin. In addition the following factors must be established: effect on various organisms; changes of activity with temperature; changes of activity on dilution; speed of action; efficiency in the presence of organic matter. To illustrate the type of information required tests with "G 4" and "G 11" are described.

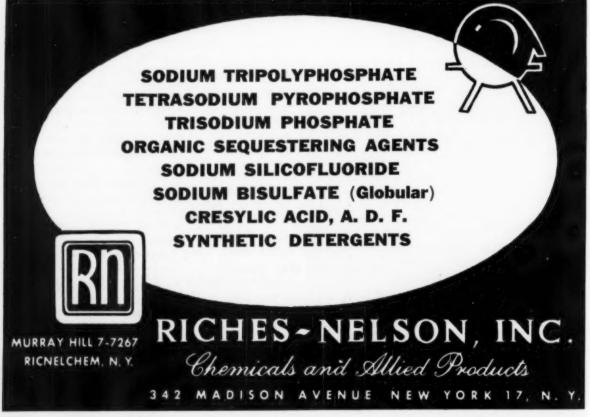
Methods of adding disinfectant to laundry and to toilet soap are discussed.

After a critical evaluation of the phenol coefficient test it is concluded that response to no single test can be used as a criterion for assessing the value of soap, but a very sound basis for claims can be made if the following tests are made: a dilution test on similar lines to the Rideal-Walker test, but modified to meet the requirements of soap solutions; penetration tests; practical trials. A full description of suitable tests is given.

Attempts have been made to express disinfectant activity by a simple index by means of the phenol coefficient. But the variable behavior of disinfectants with different classes of bacteria and at different temperatures renders such an index of doubtful value. Furthermore there is no justification in declaring a particular compound non-disinfectant because of its inability to kill B. typhosus under rigidly controlled conditions; in this connection some of the antibiotics, with their marked specificity but with their acknowledged virtues, would fare

(Turn to Page 163)





# NEW Patents

The information below is furnished by patent law offices of

LANCASTER, ALLWINE & ROMMEL

402 Bowen Building Washington 5, D. C.

The data listed below is only a brief review of recently issued pertinent patents obtained by various U. S. Patent Office registered attorneys for manufacturers and/or inventors. Complete copies may be obtained direct from Lancaster. Allwine & Rommel by sending 50c for each copy desired. \$1.00 for Canada. They will be pleased to give you free preliminary patent advice.

No. 2,588,264. Detergent Composition, patented by Louis McDonald, Boston, Mass. A detergent composition is described, comprising a fatty acid soap and two aliphatic noncationic type high molecular weight organic non-soap detergent constituents including a strong disperser for calcium and magnesium soaps, said disperser having high cleansing efficiency and low tissue absorption, a second organic non-soap detergent serving as a solubilizer for soda soap in the presence of electrolytes and a minor proportion of ethyl cellulose of the two non-soap constituents and to equalize the rate of solution of various ingredients of the finished compound detergent, said ethyl cellu-lose being colloided with mono-fatty acid ester of polyhydric alcohol. Also covered is a process of incorporating water insoluble ethyl cellulose in sodium soap to promote micelle formation, to equalize rate of solution of various ingredients in soap and to provide mechanical strength which comprises dissolving ethyl cellulose in a toluol-ethanol mixture, mixing with water containing mannide monooleate and then incorporating into the soap.

No. 2,585,356. Insecticidal Composition with a Wheat Dust Carrier, patented by George B. Wagner, Minneapolis, Minn., assignor to Pillsbury Mills, Inc., Minneapolis, Minn., a corporation of Delaware. The patent describes a dry pulverulent insecticide comprising a minor percentage of an organic insect toxicant non-toxic to humans, and a major proportion of a carrier; said carrier consisting substantially of wheat dust obtained as a product by aspiration during the centrifugal impacting stage following the normal

wheat dry cleaning and tempering stages, said dust having a particle size sufficiently small to pass through a 100 mesh screen, and wherein the content of outer envelope is at least 25%, the content of endosperm is at least 15%, and the content of waxy material is at least 2% of the total amount of wheat dust.

No. 2,592,890. Agents for Combating Pests and a Method for Killing Pests, patented by Hans Gysin, Basle, Switzerland, assignor to J. R. Geigy A. G., Basle, Switzerland, a Swiss company.

 The method of killing insects is described which comprises distributing a compound corresponding to the formula.

wherein  $R_1$  and  $R_2$  each represents a member selected from the group consisting of hydrogen and methyl and  $R_3$  and  $R_4$  each represents a lower aliphatic hydrocarbon radical to effect contact of said compound with the insects.

No. 2,591,588. Fungicidal Use of Certain Furfuryl Carbanilates, patented by David T. Mowry, Dayton, Ohio, assignor to Monsanto Chemical Co., St. Louis, Mo. The patent covers the method of protecting organic material susceptible to attack by fungi which comprises applying to said organic material, for the purpose of fungus-proofing, a fungicidal composition containing, as an essential active ingredient, a compound having the general formula

in which R is a member of the group consisting of hydrogen and chlorine.

No. 2,601,329. Detergent Composition, patented by Herbert L. Sanders, Phillipsburg, N. J., and William J. Maxcy, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware. A color stabilized detergent composition is described, consisting essentially of a mixture of 99 to 50 percent by weight of solid alkali metal hydroxide se-

lected from the group consisting of sodium hydroxide and potassium hydroxide and 1 to 50 percent of a mixture consisting essentially of about 90% of a water soluble, nonionic, surface active agent having a polyglycol ether radical and about 10 percent of thiourea.

No. 2,599,140. Iodine Detergent, patented by Abraham Taub, New York, N. Y., assignor to Benjamin Clayton, doing business as Refining, Unincorporated, a sole proprietorship. The patent describes a disinfecting detergent composition, which comprises, a major proportion of solvent mixture of glycerin and at least one glycol in which the glycol is predominantly water-soluble polyalkylene glycol and in which the weight ratio of glycerin to glycol is between approximately 1 to 3 and 3 to 1, said solvent mixture containing in solution therein minor proportions of elemental iodine, alkali metal iodide and at least one detergent, the detergent content of said composition being predominantly anionic organic non-soap synthetic detergent and being inert to reaction with iodine, the amount of said detergent being between 3 and 20% of said composition by weight.

No. 2,595,300. Soap Compositions and Soap Flakes, patented by Leopold Safrin and Frank W. Volz, Philadelphia, Pa., assignors to Wilson & Co., Inc., a corporation of Delaware. The patent discloses a soap composition capable of giving maintained sudsing and detergency in hard water and comprising, on an anhydrous basis, 75 to 85% soap, 5 to 12% of a non-ionic detergent of the structural formula

RPhOCH<sub>2</sub>CH<sub>2</sub>O(CH<sub>2</sub>CH<sub>2</sub>O) nCH<sub>3</sub>CH<sub>2</sub>OH

wherein R is an alkyl group having from 6 to 10 carbon atoms and n is an integer from 6 to 15, and 5 to 18% of anhydrous borax, said soap composition being readily soluble in soft and hard water and capable of giving maintained sudsing and detergency in hard water.

No. 2,600,668. Insecticidal Composition Comprising DDT, Pyrethrins, and Piperonyl Butoxide, patented by Lawrence C. McAlister, Jr., Cheverly, Md., assignor, by mesne assignments, to National Distillers Products Corporation, New York, N. Y., a corporation of Virginia. The patent covers an insecticidal composition having prolonged residual effectiveness composed of an aqueous suspension the active ingredients of which consist essentially of (1) pyrethrins (2) 1.1.1-trichloro-2,2-bis (p-chlorophenyl)-ethane and (3) the mono-n-butyl ether of diethylene glycol derivative of chloromethyl dihydrosafrol.

# They discovered

Those ancient salesmen, the Phoenicians, were the first to discover soap was good business. They took the Egyptians' mixture of natural soda and animal or vegetable fats and sold it to the Gauls. The Gauls — not as smart — dallied until One A. D. before building a lucrative Roman market.



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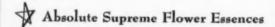
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SOAP and SANITARY CHEMICALS

### SOAP PLANT Observer

#### By John W. McCutcheon

HE use of tracer elements in the study of detergency and adsorption is common practice now in specialized research and industrial laboratories. Although, such studies to date have only indicated general results known for some time by other methods, the use of this tool will undoubtedly uncover facts which will have significant bearing in this field.

A recent paper by A. L. Meader, and B. A. Fries, "Adsorption in the Detergent Process," Ind. & Eng. Chem. 44, No. 7, 1636-48 (1952) is indicative of this type of approach. Labelled alkyl aryl sulfonate and sodium palmitate were used on cotton and wool fabrics. The alkyl aryl sulfonate was labelled by using S35 converting it first to the BaSO4 and then to the acid, which last is used to sulfonate an alykylbenzene. The potassium palmitate was labelled with C14 from radioactive barium carbonate by converting it to C14O2, condensing it with pentadecyl bromide through the Grignard reaction and purifying the resultant labelled palmitic acid through its silver salts.

Simple, isn't it? With less than a fiftieth part of an ounce of labelled materials it was shown that adsorption of syndet and soap on cotton was a physical phenomenon, while on wool it was a physical-chemical phenomenon. The presence of builders, particularly sodium sulfate, greatly increases the adsorption of the syndet, but no direct correlation could be found between adsorption and detergency although there was some similarity between the curves. Thus, the curtain of uncertainty is slowly being



unfolded on the operation of washing through the incessant attacks of many research workers.

ECENTLY on a plant visit when R soap boiling was under discussion, someone asked the question-just where does the phase study of soap come into the picture? Has it helped make a better soap? To answer this properly we must first realize that soap making is an art over two thousand years old. The date when the boiling procedure was ironed out, is not known, but it is a fact that soap was made quite well before phase studies were ever heard from. The chief contribution of phase studies to soap boiling methods has been to make it possible to give reasons for each step in the process so that a college student can become a reasonably good soap boiler in a very short time. It replaces the art of soap boiling with the science of soap boiling. The art of soap boiling doesn't die easily however, and many plant managers still feel constrained

to walk on tip toe through the soap kettle department.

The first study of soap phases should be confined to the varients; soap, water and temperature. Phase diagrams of this kind are readily available from the work of R. D. Vold, J. W. McBain and others. The next study should cover the phases; soap, water and salt. Such studies (as for example, those of Ferguson & Richardson) relate very closely to soap boiling operations and assist materially in understanding the basic procedure such as the closing and opening of the soap, the settling and the formation of the nigre. With this as a basis the student can then quickly get down to such practical considerations as to the size and number of the washes, the problem of re-circulating the lyes, the completeness of saponification on the killing change, etc. These factors vary widely among plants and soap types.

For example, the tabulation below shows a few typical kettle house specifications on finished soaps.

The toilet base, for example, must be finished to a very low free alkali and must have some salt present for proper graining and subsequent finishing operations. It will be settled longer and washed more thoroughly than the laundry bar or flake base. The high glycerine content in the industrial flake is given to indicate a possible variation between types in the same plant and not particularly as a desirable limit. Basic economy requires the removal of all the glycerine possible within the limits of lye storage space, glycerine price and the capacity of the recovery equipment. This discussion will be continued next

SINCE the July column was written, the Preliminary 1951 Tariff report on surface active agents has just come to hand. After deducting the salts of the fatty acids and the sulfonated oils, approximately 644,019,000 pounds of surfactants were produced in 1951, as against 619,689,000 pounds in 1950—a gain of 24,330,000 pounds. Actually, production of the alkyl benzenoid type de-

#### Typical Specifications for Kettle House Soaps

	Toilet Base	Laundry Bar Base	Industrial Flake Base
Real Soap	67.0% min.	67.0% min.	65.5% min.
Free Na <sub>2</sub> O	0.03-0.05%	0.3-0.5%	0.2-0.4%
Glycerine	0.3% max.	0.2% max.	0.7% max.
Salt	0.4-0.5%		



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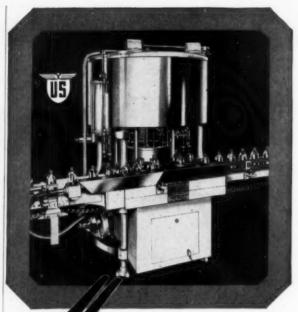
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tergents increased from 261,930,700 pounds in 1950 to 317,210,000 pounds in 1951, a gain of 55,279,300 pounds. This indicates that retail alkyl aryl based syndets continued to advance strongly in 1951, while industrial products received a small set-back from their record 1950 high.

With annual production of syndets approaching the two billion pound mark and export sales of tallow likely to drop off due to a world surplus of oils and fats, it would appear that tallow will continue in its present low price position for some time. As if this were not enough to add to the renderers gray hair, along comes a new product which may bid fair to cut off another well established tallow outlet, namely, the lubricating grease field. This product is copper phthalacyanine which is a petroleum gelling compound stable to heat changes in the range -80° to 400° F.

#### Gen. Mills New Amine Plant

General Mills Research Laboratories, Minneapolis, recently announced that it has completed a new plant at Kankakee, Ill., for the manufacture of fatty nitriles, primary, secondary, and tertiary fatty amines and quaternary ammonium compounds. The new plant is currently being operated by research personnel. When the unit launches full commercial production of amines, the plant will be turned over to the Chemical Division. Research in the amines and amine derivatives field includes development of antistatic agents for synthetic fibers, exploration of foaming qualities of the derivatives for use in detergents, and use of these compounds as water repellent agents.

#### Soap Use

(From Page 49)

teachers feel that the situation should be improved, in terms of a sufficient supply of soap or in facilities adequate for the number of students.

The subject of teaching practices is complicated but it was clearly indicated that more and better aids to

teaching cleanliness practices would be highly desirable and would be welcome.

#### Industrial Relations

W HILE the soap industry has progressed in terms of improved products and has benefitted from an overall appreciation of the desirability of cleanliness, it has kept faith with its workers. Profit-sharing was introduced by one soap manufacturer in 1887. The Saturday half-holiday; a guarantee of 48 weeks of work per year; life insurance protection for employees; sickness and accident benefits; paid vacations and holidays; and pension plans have all received early consideration and adoption by the soap in-

The amount of labor required to make 100 pounds of soap is not great, and consequently labor costs are not as high in proportion to total costs as in some other industries. Wages probably do not amount to ten per cent of total factory costs. However, the soap industry has reason to be proud of its labor record.

Soap wages held fairly level with "all manufacturing" industries through the war period but have gone above it since then. For the year 1951, the soap industry shows \$77.11 compared to \$64.88 for "all manufacturing," \$69.70 for the "durable goods" industries and \$58.53 for the "nondurable" goods industries of which soap is a part. Stated differently, the average weekly pay of a worker in the soap industry in 1951 was nearly onethird higher than that of "non-durable" industries.

It is an interesting fact that the average wage earner in America today needs to work only about onethird of the number of hours to make sufficient money to buy his family's soap requirements that was necessary in the 1890's. This is with no allowance for the larger families in the earlier period but with the requirements increased from 20 pounds then to 25 pounds per capita now.

#### Little Known Uses of Soap

THE uses of soap are innumerable and varied. By far its largest market is the home, where its chief uses are as toilet soap and as laundry soap. There are, however, very many industrial applications, ranging from the use of soap bubbles as a weather research aid to the use of soap films on wire contours for solving difficult mathematical problems of minimal

Although most people regard soap simply as a detergent, the fact is that soap functions frequently and advantageously for other than detergent reasons. Because of its wetting and emulsifying powers, as well as its cleansing power, soap has found extnsive range in many commercial processes, including those connected with plastics, metal and glass polishers and cleaners, wool production, pharmaceuticals, and road building and maintenance. It has also been used in large quantities as a raw material in producing synthetic rubber. Just a few examples of how industries use soap are as follows:

Animal busbandry-Plain soapand-water cleanliness helps control the insect pests and parasitic enemies of herds, and cuts down disease among animals. Compound Solution of Cresol, USP, probably the best known disinfectant, is a soap solution of cresol. Barn-and-stable sprays have soap in them. Constipation in cattle often treated by a soap-solution enema. An aid in treatment of such skin diseases as impetigo and erythema.

Building and construction-Soap is used as a waterproofing agent in cement, mortar, plaster, and wood; to disperse paraffin in making waterproof compositions for treating concrete; in the preparation of new bitumen and rubber suspensions used to prepare building blocks from emulsified asphalt or clayey soil.

Inks and Inkmaking-It has been said that "no one auxiliary material contributes more to the production of inks than does common soap."

Insecticides-Soap is used as an emulsifier and "wetting agent." It is important as an ingredient in plant protection sprays, including soap emulsions of insecticides such as pyrethrum, copper sulfate, and arsenites.

Lubricants-In World War II, soap speeded up production of shell and cartridge cases, barbed wires, cables, springs, wires, and steel blanks of every kind. It is an important compound of heavy-duty greases, piston lubricants, transmisson greases, and cooling and lubricating fluids for drilling and metal cutting. It has been added to lubricants for airplanes, pumps, and carburetor valves.

Mining—Soap has many important uses in connection with drilling, mining, and ore treatment, and oil production and metallurgy. It is an aid in preventing water seepage into oil wells, in recovering oil from depleted sands, in increasing the productivity of wells, and in the flotation system for concentrating ores.

Paints—Soap is used in the preparation of paint pigments, blackout and luminescent paints, and especially emulson paints.

Rubber—Without soap and its micelles, the production of synthetic rubber during World War II would not have been adequate—and the winning of that war was contingent upon large quantities of synthetic rubber. Soap is used in making foamed rubber products; during the molding of rubber articles; in preparing sponge rubber floors; in reclaiming rubber; and in keeping the butadiene and styrene in emulsion during polymerization processes for making synthetic rubber.

Washing fruit and vegetables
—Soap is used to remove insecticides, bugs, and organic debris. Before being processed into frozen juice concentrate, about thirty million boxes of Florida oranges (practically half the total annual Florida orange production) receive two soap-and-water baths.

Quite often an entirely new class of soap product is developed to meet a specific need. A case in point are the indicator soaps which first became prominent during the "last" war and are still used in munitions plants.

Most people would be surprised and possibly quite shocked to find their soaped skin turning a brilliant red or a bright yellow-orange, but many employees accept such a phenomenon as a matter of course in connection with shell loading at ordnance plants. The presence of the unnatural color is merely a signal—a warning that some explosive residue, either T.N.T. or "tetryl" still remains on the body. The worker just scrubs a bit longer until the color disappears and

then steps from the shower room, confident that he is free of the contaminating explosive.

This convenient phenomenon is the direct result of using an indicator soap, made to government specifications, and containing about ten per cent of potassium sulfate. This compound reacts with T.N.T. to produce the yellow-orange color, and with the tetryl to form the red.

#### Soap and Health

THE value of cleanliness in the prevention or the spread of disease is so well known that there is no reason to dwell on it. The early discovery of the nature of germs by Pasteur; the application of cleanliness principles to the war wounded in the Crimea by Florence Nightingale; the reduction in epidemics following sound public health practices, as fostered and promoted by public health officials, all speak eloquently on the subject.

The essence of the health value of cleanliness of the hands, face, and body has been clearly stated in a publication, "Making and Keeping Americans Well" by the National Education Association in 1943. Michale M. Davis and Bernhard J. Stern, wrote: "Cleanliness of hands helps to check the possible spread of disease germs which enter the body through the nose and mouth. Moreover, bodily cleanliness affords a measure of protection against vermin and against skin diseases which are "promoted by an accumulation of secretions and debris on the skin."

Whether soap destroys the living organisms on the skin or whether they are removed along with the dirt, grease, and soil makes no material difference. For the most part, people who have studied the subject seem to agree that some of both actions take place. The net result is so favorable that soap and cleanliness are in the front line of the constant war on disease.

A colorful poster was issued recently by the New York City Department of Health cautioning parents that "Cleanliness is of extreme importance in the fight against polio in children." Tens of thousands of these posters and hundreds of thousands of similar pamphlets were distributed throughout the city during the epidemic of 1950. In fact, the Health Department campaign to educate parents was instrumental in getting the Board of Education to provide soap and towels to the New York City schools.

The current "Polio Pledge" sponsored through the country by the National Foundation for Infantile Paralysis asks parents to promise: "I will remember to teach my children to scrub their hands before putting food into their mouths." To judge from numerous representative newspaper clippings, their message is making considerable impression.

The National Tuberculosis Association's pamphlet, "How to Kill TB Germs," closes with the advice that "Soap and water are cheap. Use them to protect against tuberculosis." And their pamphlet for school children shows a cake of soap to induce them that "It's best to wash hands with soap and water."

The use of soap and water is so common that just to mention the "lift" given by a soap-and-water bath—or by even cleaning the hands and face—brings radiant positive agreement.

Specific instances of the therapeutic or psychological value of soap and water are commonplace. One interesting story appeared in the newspaper not too long ago and illustrates the point:

"It seems that the Episcopal Mission Society in New York City finances a haven for young children who, for one reason or another, must be separated from their parents. Naturally, these youngsters are going through a trying emotional adjustment. They need all the feeling of security and warmth and love they can get. And do you know how the Mission Home helps to keep their little spirits up? With a bath every night before bedtime, with clean pajamas every night, fresh sheets every night, and a complete outfit of fresh clean clothes every single morning. That may sound like a lot of laundry, and it is. But the home has found out that it pays in human dividends like nothing else."

# Sanitary Chemicals Section

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# PICNICS without BUGS

INDOORS OR OUT, death comes quick and sure to flying, crawling, stinging insects in the face of REAL-KILL Insect Bomb's lethal mist . . . and the Cook Chemical Company, Kansas City, Missouri, supports its claim for the speedy effectiveness of their new Insect Bomb with a money-back guarantee on the label.

Here again is Teamwork — an excellent product plus superlative packaging. Again SPRA-TAINER has been chosen above all other propulsion cans because its patented "No Side Seam — No Top Seam" construction protects products like no other pressure package . . . and because its exclusive "Modern Design" has eyeappeal that guarantees a real killing in sales!

Crown Can originated SPRA-TAINER. Crown Can leadership is evidenced in the design and manufacture of fine cans for almost every use.



CROWN CAN

CROWN CORK & SEAL COMPANY

One of America's Largest Can Manufacturers . Plants at Philadelphia, Chicago, Orlando . Branch Offices: New York, Baltimore, Pittsburgh, St. Louis

# **MADEWELL PRODUCTS**

presents



# The improved portable Madewell electro fogger

Specifications: Completely encased in molded plastics, making it a thing of beauty. Perfectly balanced—easy to operate. Capacity approximately one quart. Length  $10\frac{1}{2}$ "; Height  $12\frac{1}{2}$ "; Width  $5\frac{3}{4}$ "; operates on 115 volts AC-DC (other voltage available by special order). Weight 15 lbs. Fully Guaranteed. Priced within easy reach of businesses, stores, homes. ULL

The perfect fogging device for use in hotels, motels, theatres, auditoriums, schools, hospitals, restaurants, department and clothing stores, storage and warehouses, homes, railroads, dairies, poultry farms — and any and all places troubled by insect pests.

This is not an ordinary sprayer. It generates super-heated dry steam which vaporizes and activates insecticides, and also develops approximately 125 pounds pressure. The Madewell produces a fog loaded with insecticide that will fill an average room with a death-dealing insecticide in a matter of seconds. It reduces the messiness of greasy film on furniture, floors, etc. that comes from ordinary sprayers. It has terrific drive-in power. You can drive insecticide into cracks and crevices to get crawling insects.

It is light in weight. Anyone can handle it. It is 100% portable, not limited to any extension cord. It can be carried to any room or area. Will spray anything in liquid form. For perfection in insecticide sprayers investigate the Madewell.

MANUFACTURED BY:

#### MADEWELL PRODUCTS, INC.

3125 EAST 7th STREET, OAKLAND, CALIFORNIA

Inquiries invited from salesmen, jobbers, dealers, etc.

Eastern Distributor: SPRAY INCORPORATED

Box 3 — Ampere East Orange, New Jersey

Manufacturers of Spraysect Insecticide for use in the Madewell Sprayer.

We also specialize in private label insecticides.

# **GREATER**

# "SHELF-STABILITY"

# FOR NO-RUB WAXES

Leading manufacturers of water emulsion waxes and polishes have adopted Mantrose Shellac because of its high quality, uniformity and stability.

# THE MANTROSE CORPORATION

Importers • Bleachers • Manufacturers
138A FORTY-FIRST STREET, BROOKLYN 32, NEW YORK

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ALLIED BASIC CHEMICAL CO. Torento, Canada

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C. M. DURBIN COMPANY Cincinnati, Ohio J. H. HINZ COMPANY Cleveland, Ohio

W. D. HODGES CO. Boston, Mass. Your "Q" to Quality

GLOSS

DURABILITY

LEVELING

WATER RESISTANCE

ANTI-SLIP

# WITH MANTROSE #65 REFINED WHITE SHELLAC



HARRY HOLLAND & SONS, INC. 9 So. Clinton St., Chicago, III.

R. L. KELLEY Danbury, Conn.

AUGUST, 1952

JAMES O. MEYERS & SONS Buffalo, New York

EMMET NICOLAI San Juan, Puerto Rico H. C. ROSS Burbank, California

E. M. WALLS CO. San Francisco, Calif.

# WHY PAY HIGH PRICES

FOR NATURAL ESSENTIAL OILS?

Change to ...

FELTON

ARTIFICIAL ESSENTIAL OILS

Economical! Available! Authentic!

- ABIES SIBIRICA
- ALLSPICE
- BERGAMOT
- CASSIA
- CEDAR LEAF
- CINNAMON
- CITRONELLA

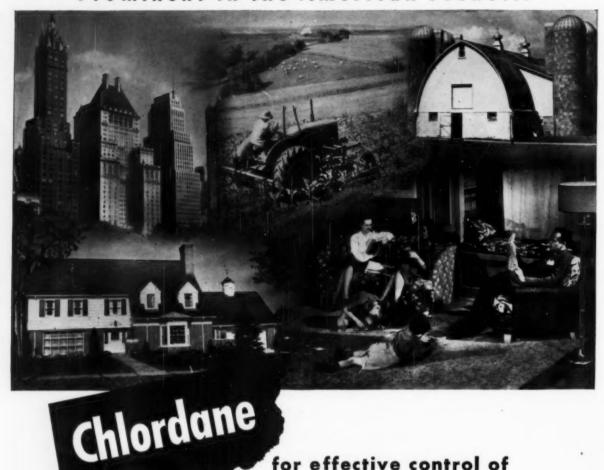
- CLOVES
- GERANIUM
- LAVENDER
- LEMON
- LEMONGRASS
- ORIGANUM
- PATCHOULY

- PIMENTA
- PINE NEEDLES
- ROSE BULGARIAN
- SAGE
- THYME
- VETIVERT
- YLANG YLANG





#### Prominent in the American Scene ...



for effective control of a wide variety of insects

> Ever-widening demand for chlordane affords proof of the job it is doing. It is the unusually versatile insecticide capable of effectively controlling ants, flies, roaches, carpet beetles, silverfish and many other insects, including subterranean termites.

Continuing reports indicate that chlordane has been effectively applied towards destruction of initial termite colonies.

Write for Velsicol Technical Bulletin No. 40, for detailed information as to proper formulations and applications.



NOW

Perfume your Para Blocks and Crystals fe

less th

with PARASCENT

PINE · CEDAR-PINE
LILAC or ROSE

Eliminate the Para odor from your Paradichlorbenzene blocks and crystals with these 4 pleasing fragrances at a cost of less than 1¢ per pound! 12 to 16 ounces of PARASCENT to 100 pounds of Para gives enough fragrance for the entire life of the crystal or block.

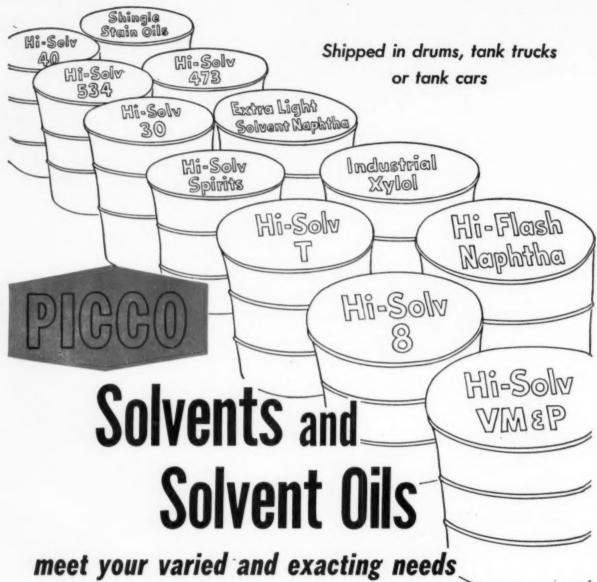
Convince yourself—make your own tests! Samples gladly furnished at no cost or obligation.

PARASCENT:

AROMATIC PRODUCTS, Inc.

15 EAST 30th STREET, NEW YORK 16

CHICAGO . DALLAS . MEMPHIS . PITTSBURGH . LOS ANGELES . BOSTON



Shown above are only a few of the PICCO Solvents and Solvent Oils. This complete line includes

aromatic petroleum naphthas, coal tar naphthas, various heavy naphthas, solvent and heavy oils.

Write for bulletin giving complete details.

# PENNSYLVANIA INDUSTRIAL CHEMICAL CORP.

Plants at: Clairton, Pa.; West Elizabeth, Pa.; and Chester, Pa.



# **BIGGEST WAX NEWS IN YEARS!**

#### Concord introduces

a versatile, easily-emulsified, uniform-quality wax

at a price that brings welcome savings

# CONCORD WAX #407 ¢ PER P

FOB-Moorestown, N. J.

Figures, not words, write the headlines of this new, sensational Concord Wax development!

Refined Candelilla Wax #3 N. C. Refined Carnauba Wax REFINED CONCORD WAX #407 MELTING POINT 86°C.

Melting Point 71°C. Melting Point 81/84°C.

Just figure the savings now possible through the use of Refined Concord Wax #407 at 47¢ per pound . . . compared with today's high prices of #3 N. C. Carnauba Wax and Candelilla Wax.

Concord Wax #407 makes a water-wax emulsion that is translucent, light in color, absolutely stable. This emulsion has fine particle dispersion, excellent gloss, superior wearing and anti-slip qualities. Ideal for floor waxes, paper sizings and coatings, fruit dips, leather dressings, leather finishes, and many other uses!

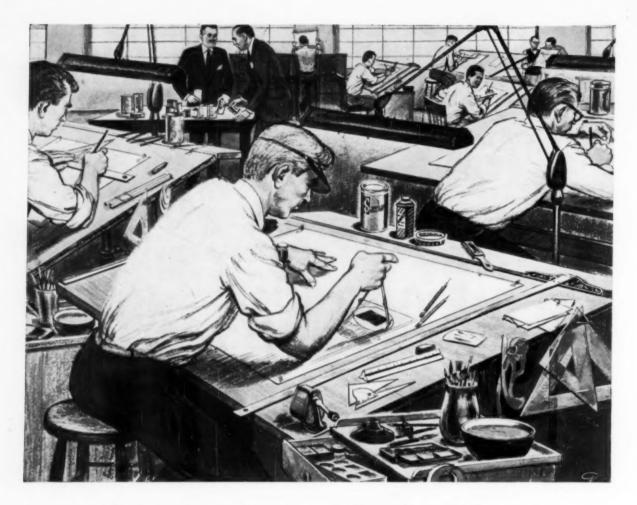
Send coupon now for samples of the new wax and of emulsion. Test! Compare results with other waxes at double the price or more!



#### CONCORD CHEMICAL COMPANY

Moorestown, New Jersey

I understand that your new Refined Concord Wax #407 with a Melting Point of 86°C. is available at only 47c per pound. Please send me, without charge, a sample pound of this wax and a sample of emulsion made with #407. Send technical data sheet also.



# He's got designs for business!

Here's a man you rarely see, but who, nevertheless, is very important to you. He's important because the main purpose of his job is to increase your business!

He is the Canco development

engineer. He knows, as you do, that the right container is the *best* salesman for any product.

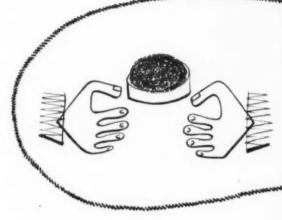
His job, and the job of many others like him, is to design and develop *better* containers for products. His service is one of many that the American Can Company offers to assist you in building your business.

Canco, backed by over half a century of service, will continue to develop better ways of solving its customers' needs.

#### CONTAINERS - to help people live better



#### Just package



...and SELL

It takes little or no processing for you to put Monsanto Santochlor (para-Dichlorobenzene) on the market. Just package or block . . . and  $\mathit{sell}$ .

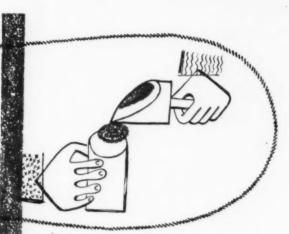
Santochlor is widely used as a deodorant, for controlling moths and larvae, and to control peach-tree borers.

Santochlor is available for immediate shipment in five standard crystal sizes, enabling you to select the exact form you want. Crystal sizes: No. 0, approximately ½-inch pellets, just right for shaker-top cans; No. 1, approximately ½-inch pellets, for packaging; No. 34, approximately rice-size granules, for shaker-top cans and for compressing into cakes; blocking mix, a mixture of sizes under 7-mesh; fines, a mixture of sizes less than 16-mesh.

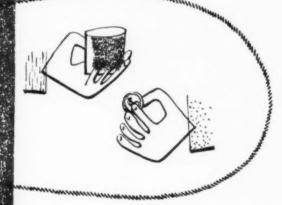
Order your supply of Santochlor...today. For prompt service contact the nearest Monsanto Sales Office or MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri.

Santochlor: Reg. U.S. Pat. Off.

DISTRICT SALES OFFICES: Birmingham, Boston, Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Houston, Los Angeles, New York, Philadelphia, Portland, Ore., San Francisco, Seattle, Twin Cities. In Canada, Monsanto Canada



or block



# SANTOCHLOR



SERVING INDUSTRY ... WHICH SERVES MANKIND



# Why are **DREYER SYNTHETIC SCENTS** quite baffling to a bee?

A bee could well have trouble telling the difference between a Dreyer Perfume Scent and Nature's original flower odor it authentically duplicates.

What's more, the stability, substance, long-lasting body, and uniformity of Dreyer Floral Creations and Bouquets often make them more satisfactory than the originals.

Quality perfume products cost you less to produce, with Dreyer Odors. Dreyer's stabilized prices mean extra nice profits. Prove it by sending today for the whole story of Dreyer Perfume Creations.

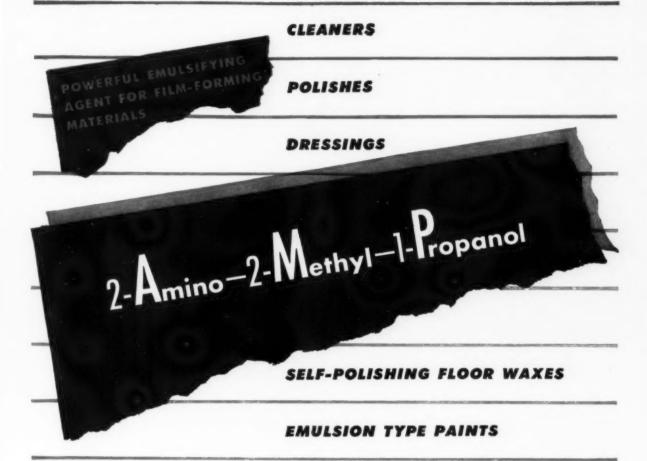
# P. R. DREYER Inc.

119 WEST 19th STREET, NEW YORK 11, N.Y.



for Essential Oils, Aromatic Chemicals, Perfume Compounds

Please send your catalogue of Dreyer Synthetic Sc	ents. I'm especially interested in samples of
***********************************	
YOUR NAME	YOUR COMPANY
STREET	CITYZONESTATE



### PURE MATERIAL

Molecular Weight89.14
Melting Point, °C30 to 31
Boiling Point, °C
Specific Gravity0.934 at 20/20°C
pH at 20°C of 0.1M Solution11.3
Vapor Pressure at 20°Capprox. 1mm
Flash Point (Tag. open cup)159°F
Solubility in Water g/100 m1 at 20°Ccompletely miscible
Index of Refraction at 20°C1.449

AMP IS AN OUTSTANDING emulsifying agent for film-forming materials and imparts excellent water resistance to the film.

The higher fatty acid soaps of AMP possess extremely high emulsifying efficiency and are stable in color. AMP's moderately high boiling point (165°C) minimizes evaporation loss and objectionable fumes during manufacture of emulsions—without detracting from desirable water resistance and durability of the film.

With its advantage of low combining weight (89.14) and its ability to emulsify a wide range of materials, AMP may solve your emulsification problem. AMP also suggested for synthesis of dyestuffs, wetting agents, photographic developers, and pharmaceuticals. Write Industrial Chemicals Division, Commercial Solvents Corporation, 260 Madison Avenue, New York 16, N. Y.



ALDEHYDES

ALCOHOLS

AMINOALCOHOLS

AMMONIA . NITROPARAFFINS

SOLVENTS .

PLASTICIZERS

. !NTERMEDIATES

AUGUST, 1952



A new sensational
development by our
Laboratories for so-called
"Snow Sprays" used for
decorating Christmas trees

# SNOPINE COMPOUND

- excellent masking of basic plastic
- keeps the "snow" dry
- reminiscent of real pine forest

Write for samples and data to

Polak's Frutal Works, Inc. Middletown, N. Y.

CHICAGO office: 800 N. Clark St.



# Still another MGK price reduction on Allethrin!

You can cut costs and improve your profits on next year's aerosols and sprays—because MGK has lowered the price of Allethrin again.

This is the third time MGK has reduced the price of Allethrin. In October 1950, when it was first available, MGK's price was \$47.50 a pound—substantially lower than that of any other producer. In September 1951, while supplying over 90% of America's Allethrin, MGK reduced the price another \$5 a pound. This year's reduction, like the last, is made possible by rapidly expanding volume and steadily increasing efficiency.

#### PROMPT DELIVERY - KNOWN PURITY

Deliveries of MGK Allethrin will be prompt and dependable, as in the past. Its known purity will be unchanged.

#### COMPLETE FORMULATION SERVICE CONTINUES

MGK's formulation service still offers an unlimited range of partial or ready-to-pack formulations to fit any production setup. Free assistance in developing, packaging and selling new products is still yours for the asking.

#### NEW PRICE LISTS HAVE BEEN ISSUED

If you have not received our new price list on Allethrin call or wire factory immediately. Check these prices to see if you are getting the extra money that's yours with MGK formulations. An MGK field service man will show you how to increase your profits.

McLAUGHLIN GORMLEY KING COMPANY

MINNEAPOLIS 14, MINNESOTA

# -MOORE-DISPENSING EQUIPMENT

to keep your Soap Sales Booming!

- Twenty-three different styles
- · Liquid, lather and powder
- · Good looking. Smooth working
- A range to meet any price situation...any type installation
- Backed by half century reputation for outstanding quality



No. 100



No. 300



No. 425



No. 500



No. 400



No. 200



Peer No. 50



No. 600

Steady soap sales depend upon reliable dispensers. We have specialized in Better Soap Dispensers for more than fifty years.

Complete line shown in Catalog Sheets; mailed, together with price list, on request.

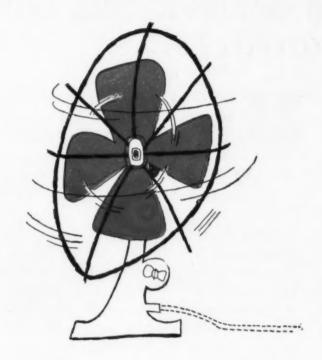


101 WARREN STREET



NEW YORK 7, N. Y.

Quality-proven Soap Dispensers and Dispensing Equipment



### There's a better way to banish paint odor

You'll sell more paint if it doesn't smell like paint. Use MM&R Paint-Odor Neutralizers. They're specially formulated... strong enough to banish the most stubborn paint odor, yet low enough in cost to permit their use in "dime store" brands.

Whatever your product or your odor

problem, the MM&R Technical Service Department will gladly help you take the "m" out of "smell." Send us a sample of your paint and see how much better MM&R can make it, sales-wise. Or consult with your MM&R representative.



### Contacts...

HROUGH active participation in the trade association serving your business, you not only are kept closely and promptly informed on matters of deep interest and importance. Your opportunity to make new contacts within your own industry is equally of value, — and thus to know more about the problems of others

who are in the same boat with you.

Membership in CSMA by your firm means association with the leaders in the field of disinfectants, sanitizers, insecticides, deodorants, floor waxes and polishes, soap and detergent specialties, and other chemical specialties,—an opportunity for valuable contacts and discussion of common problems. For over 37 years, these leaders, large and small, have been active in CSMA affairs.

In the light of business conditions as they exist today, membership in CSMA offers numerous benefits to your firm. Can we send you further information?



## CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, INC.

110 East 42nd Street

Clarence L. Weirich, President

New York 17, N. Y.

Melvin Fuld, 1st Vice-Pres.

T. Carter Parkinson, 2nd Vice-Pres.

Peter C. Reilly, Treasurer

H. W. Hamilton, Secretary

### "FREON" PROPELLENTS— TO MEET EVERY AEROSOL-PACKING NEED



#### 21 Different "Freon" Propellents **Show Versatility of These Products**

In 1951, twenty-one different "Freon" propellents were supplied to aerosol manufacturers. For example, there were three different propellents for foam products, three different ones for room deodorants, and four designed for insecticides. This versatility of "Freon" propellents is vital to the manufacturer, since each aerosol product has to be pressure-packed to its own requirements. And whatever the product-suntan oil, rug shampoo, room deodorant, shave cream, cosmetic or personal deodorant -there's a "Freon" propellent to meet every specification.

For suntan lotion, specifically, it is desirable to have a wet spray with large particle size. Good solvency properties of the propellent are extremely important, as are stability and non-corrosiveness. "Freon" propellents assure these required characteristics for easy and efficient application from the aerosol dispenser.

"Freon" propellents provide the manufacturer with good control of any product to be dispensed in all three types of aerosols: surface-coating spray, foam, and space spray. Characteristics of solvency, stability, and pres-

#### **OUTSTANDING ADVANTAGES OF "FREON" PROPELLENTS**

- 1. Nonflammable, nonexplosive 4. Stable and of uniform quality
- 2. Virtually nontoxic
- 5. Available in wide range of pressures
- 3. Noncorrosive
- 6. Good solvent properties
- · 7. Applicable to all types of aerosols

**Product:** SUNTAN LOTION Aerosol type: Wet Spray—large particle Active ingredients: 25% to 40% of solution Pressure: 25 to 30 P.S.I.G. Propellent: 50%-"Freon-12" 50%-"Freon-11" 0

sure can be varied as to product need . . . giving a "Freon" propellent for every aerosol application. Where exceptional stability is required (as in many cosmetic aerosols), solutions of "Freon-12," "Freon-22" or "Freon-114" are suggested. For full information on the use of "Freon" Safe Propellents and their characteristics, write: E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division, Wilmington 98, Delaware.



050% Applyersary BETTER THINGS FOR BETTER LIVING ... THROUGH CHEMISTRY



reon" is Du Pont's registered trade-mark r its fluorinated hydrocarbon propellents.





A smile of satisfaction on your customer's face means PRODUCT ACCEPTANCE . . . REPEAT SALES . . . and that weighs dollars!

Insecticides . . . household deodorants . . . aerosol products can produce this smile through the appeal of odor. It's perfume that does it! . . . Perfume carefully designed to mask and cover where necessary ... to disappear completely when its job is done ... the proper type to suit the use AND THE USER.

> Send us a sample of your product, unperfumed. Perfume chemists, skilled in this particular job, will develop and suggest an ideal perfume to meet your requirements . . . odor appeal to bring out that vital smile of satisfaction.



ameringen · haebler, inc.



### What do plumbers read?

FYOU were a plumber, would you read the jewelry trade publications? Or vice versa? Certainly not. Nor would you read regularly magazines which carry only an item or two in occasional issues of interest to you. Plumbers read plumbing magazines because all issues of these publications are of interest to them from cover to cover,—of interest not only in the text pages, but in the advertising pages as well. Advertising salesmen for a jewelry magazine may tell you that all the plumbers read their sheet, but is it common sense to believe this?

The situation among the readers of SOAP & SANITARY CHEMICALS is analgous. Firms and people interested mainly in soaps and detergents, insecticides, floor products, aerosols, and other chemical **specialties**, their sale, distribution, uses, and formulation, are the principal readers of this magazine. Its editorial content is designed for them, and **for them alone**. Its reading matter is not diluted with a bulk of stuff in which they have not the remotest interest.

SOAP & SANITARY CHEMICALS is a specialized publication catering to a highly specialized field. It does

not cater to its field as sort of a small side issue while trying to cover a dozen other fields at the same time. Every month it carries 70 or 80 pages of reading matter of specific interest to its readers, not just a few scattered items diluted with 95% of material of no interest whatever.

So when they hand you the old baloney that this or that sheet also covers the field of soaps, floor products, insecticides, aerosols, janitor supplies and kindred interests, thumb through a few issues and compare with SOAP & SANITARY CHEMI-CALS. Then ask yourself why people with their main interest in this field would read other publications reqularly. If the stuff of interest is not there to read, why would anybody continue to read? But we do know they read SOAP & SANITARY CHEMI-CALS month in and month out, and renew their subscriptions year after year. SOAP'S high subscription renewal rate (80.63% first half of 1952) proves this.

That's the difference between SOAP & SANITARY CHEMICALS and the others. That's why it has top reader interest in its field, top advertising effectiveness.

#### SOAP & SANITARY CHEMICALS

Published Monthly by

MacNAIR-DORLAND COMPANY 254 West 31st Street, New York 1

# can't sand floors forever!

## Rederal STRIP FAST THE OUTSTANDING SEAL AND FINISH STRIPPER

2 EASY STEPS



• JUST APPLY
Not "tricky"—easy to
apply with lamb's wool
applicator or brush,
and the "stripper"

oes the work.



. THEN BUFF

Works easily — buffs. clean and dry without clagging steel wool. Saves time and money —steel wool pads can be used repeatedly.

#### NON-INFLAMMABLE

Where sanding is impractical STRIP FAST IS THE WAY to strip floors of old sealers, finishes and paints from wood, concrete and linoleum.

New wood floors are expensive—unnecessary sanding shortens their life. Each year fewer wood floors can be refinished by sanding . . . because older floors cannot be sanded too close to the tongue and groove without splintering and dangerously weakening them. STRIP FAST economically and safely removes unsightly "buildup" and accumulation of old sealers along floor edges and in corners. It's the amazing way to strip floors of old finishes.

#### STRIPS QUICKLY AND EFFICIENTLY

The old sealer or finish blisters and lifts in a matter of minutes . . . no long waiting for action—can be buffed almost immediately—eliminates costly waiting time.

## SAFETY FEATURES

- Eliminates fire and explosion hazards
- Will not harm skin or clothing under ordinary conditions
  - Safe to use anywhere

#### NEEDS NO AFTER RINSE

No wax, acid or caustic to be rinsed or neutralized.

Just buff, vacuum or sweep clean and the surface is ready for refinishing.

STRIP FAST is the amazing "safeway" product that means additional sealer and floor maintenance sales for your organization. Remember, when STRIP FAST is used, sealer and gym finish should be sold to preserve and protect the floor.

Increase your floor-line sales—PLUS business for you. Write us for further information and literature.

## Rederal VARNISH DIVISION

2841 S. Ashland Ave., Chicago 8, III. The Pioneers in Floor Sealers - Finishes and Waxes

## A "RINGER" EVERY TIME





#### HITS THE MARK IN SALES AND CUSTOMER APPEAL!

No-Roma has greatly widened the field of uses for disinfectants due to its odorless feature, plus its high potency as a germicide being combined with equally high fungicidal qualities.

No-Roma contains no corrosive elements and is an excellent antiseptic and germicide as well suited for use in many fields of industry as it is in the home.

No-Roma, Baird's Quaternary Ammonium germicide, remains stable over long periods of storage and is non-toxic when used as directed.

No-Roma, diluted as directed, can be safely used in homes, schools, dairy and food industries, laundries, beauty parlors, hospitals, funeral homes, farm and storage warehouses.

No-Roma is widely used on industrial equipment to prevent contamination on gas masks, goggles, safety shoes and boots, inhalators and respirators.

No-Roma: Antiseptic - Bactericide - Deodorant - Disinfectant - Germicide - Fungicide. Coefficient 25 or 35 by the F. D. A. Method.

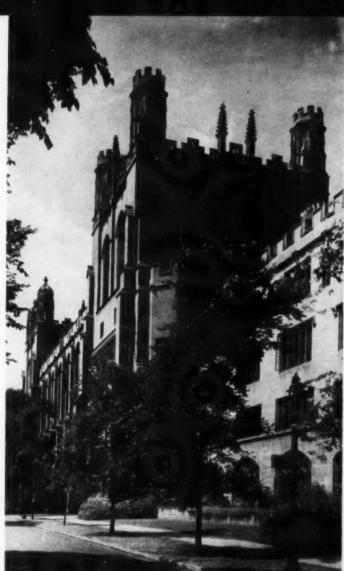
Our Informative 20-Page Booklet Available Upon Request.

## Baird & McGuire, Inc.

HOLBROOK, MASSACHUSETTS



Creators and Compounders of the best in cleaners and disinfectants for over 43 years.







Harper Memorial Lib:ary (above); dry dust mopping Research Institute Building and vacuuming carpets, Mandel Hall, at Univ. of Chicago.

## Sanitary chemicals for Chicago University's Colossal Campus Cleanup

HE cleaning and maintenance of the 96 buildings situated on the campus of the University of Chicago is an operation that requires a sizable quantity of sanitary chemicals and equipment for their application.

This great powerhouse of intellectual energy may be more famous for other tremendous accomplishments, some of them intangible and incomprehensible to the lay mind, as for example, Dr. Michaelson's historic measurement of the speed of light; others of world shaking import, as in the By H. H. Slawson

more recent construction of the world's first atomic pile under the west stands at Stagg Field.

But in exploring Chicago University's housekeeping operations the realization quickly dawns that the unglamourous backstage grind of keeping the Midway campus spic and span day after day could well be something to sing about.

The University's superintendent of buildings and grounds, W. R. Zellner, who is responsible for the colossal cleanup job, is very modest about it. But listen as he tells you that every day there are 71 buildings—no less—to be swept, dusted or scrubbed under his supervision.

They are used for class rooms, lecture halls, laboratories, libraries, hospitals, museums and other academic purposes. In height they range from one story to seven and floor areas vary from a mere 1,000 square feet up to 150,000, possibly larger. Add to these basic statistics Mr. Zellner's casual remark that the job calls for daily scrubbing and polishing of

almost 300 toilets and that, at suitable intervals, the 16,000 windows in the grey stone Gothic structures have to be washed.

Actually, Mr. Zellner explained, there are 96 buildings on the University's 100-acre campus, while several more are under construction. Functionally they are classified as academic, administrative, laboratory, athletic, medical, dormitory and "affiliated."

Student dormitories have their own individual housekeeping service, as is true of the affiliates, such as the theological seminary, the faculty housing, International House for foreign students, the temporary housing for veterans and the group known as the Chicago Midway Laboratories.

Cleanup work in the athletic stands and grounds is the responsibility of the athletic department but five athletic buildings are serviced by Mr. Zellner's staff. In the medical group his sanitary operations are limited to school areas, while clinics and hospitals are handled by the hospital management itself. Keeping in mind that sanitary maintenance in these excepted places is quite an extensive job, too, but subtracting them from the total 96 buildings and it will be realized that Mr. Zellner still has plenty to do in the remaining 71. Remember, too, that he also looks after building alterations, structural maintenance, heating, plumbing and electrical services and facilities and, for good measure, supervises horticultural work involving lawns, trees, flower beds and landscaping generally.

Organization is the key to efficient performance of the many operations he directs and it will be found that each man in his small army of 300 workers, from the privates on up, is carefully selected and assigned to definite duties.

In the sanitary maintenance sector, to which our interest is confined here, first assistant to Mr. Zellner is G. R. Lyman, whose title is "Inspector of Services." Under Mr. Lyman are a head janitor foreman and a night janitor foreman. Under these two are ten group leaders or working foremen, each in direct command of crews

numbering from five to nineteen workers.

Janitor service starts at 6 a.m. and continues to midnight and every possible use is made of the most modern mechanical and chemical resources available. That policy, Mr. Zellner declared, cuts costs immeasurably.

Janitors follow the usual routine of sweeping, dry mopping and scrubbing floors and dusting furniture in class rooms, offices, stairways and halls; washing windows, walls, doors, woodwork and "inside glass"; washing blackboards, cleaning and treating leather furniture upholstery, rugs, Venetian blinds; removing drapes for the dry cleaners; cleaning light fixtures and replacing dead bulbs; refinishing floors, after sanding by the carpenters; and waxing the infinite acres of interior wooden wall paneling that go with Gothic architecture.

Then there are those toilets, almost 300 in number, which are so thoroughly scrubbed and polished every day that deodorants and disinfectants are largely dispensed with. For years, Mr. Zellner said, this treatment, plus good ventilation, has eliminated any need for chemical sanitation specialties in the toilets.

In cleaning up laboratories, janitors must be on the alert for broken beakers or other glassware that students or faculty members fail to deposit in containers provided for this purpose. In winter, if classrooms or other quarters become overheated, the janitor on the beat is responsible for initiating action to get the temperature back to the 70° level. On dark days they must help curtail maximum use of electricity. Before leaving they make certain that nobody has gone off leaving every light in a laboratory burning brightly. Considering the generally well known effect of inflation on academic exchequers, leaving lights burning needlessly is a serious misdemeanor around the U. of C.

Floods, which may occur when experimental laboratory apparatus goes wrong, are an ever present hazard. Fragile tubes, carrying running water for days on end, may break, or a hose may slip off its metal attach-

ment, if water pressure varies, and this always seems to happen in the dead of night, when every janitor has gone home. Next morning there's quite a scramble to clean up the resulting mess before the 8 o'clock class convenes and sometimes it's expensive. There were three such accidental floods last year, for one of which the cost of repairing the damage done, ran to a considerable figure. After rain storms, if an overburdened sewer should back up in basements, janitors must be on hand promptly with mops and pails.

Detection of defective door closers, locks, window latches and cords, plumbing or steam pipes is another janitorial responsibility. If immediate action is urgent, as in the instance of a bursting steam line in a wash room, the janitor reports by phone to the proper authority, so that building maintenance men can be rushed to the location in an emergency car. Where faults discovered by the eagle-eyed trouble scouts do not require immediate action, the janitor must make a written report to his group leader, who passes it on for appropriate attention later.

This procedure, Mr. Zellner said, has a definitely helpful influence on janitor morale, creating in them the feeling that they are important persons, essential to the University's welfare and best interests. This spirit is undoubtedly a highly effective factor in the eminently successful achievements of the sanitation corps.

Before leaving, night janitors become "turnkeys," to see that all doors are locked; day men open up first thing in the morning. On occasion, too, the janitors perform other unusual functions. At special university events some of them double as "fire guards" while at a campus "Sing" or at convocations and commencement ceremonies they direct traffic and keep order generally. Such duties were assumed by the janitor corps in the University's early days and have been continued under a "status quo" agreement with the union.

On the janitor staff are five women, remnants of a larger number employed during the wartime man-



Top left: cleaning cry dust mop in electric dust extractor in Chicago U's. Research Institute Building, G. R. Lyman, inspector of service, in photo in upper right, checks seams and fringe of

curtains being vacuumed in Mandel Hall. Lower left view is of scrubbing machines and water pick up units in the Ryerson Building. Men at bottom right are oil mopping basketball cages.

power shortage. So far as possible, these lady janitors perform the same functions as the men and also serve as maids or "house matrons" in women's rest rooms.

To be a janitor at the University of Chicago a man must be under 45 years of age at the time of his employment. He must be a citizen of the United States and graduation from a high school or equivalent institution is desirable. One month after starting he must pass a strict physical examination and his continuance on the job depends also on his rating for working ability, character improvement and general attitude. Ability to get on well with faculty people is very important. Provided the man shows promise and meets all other requirements, his first pay raise comes

two months after his start.

Turnover on the janitor staff is not too extreme, considering the total—105. Last year only twenty new men were hired, while the janitor with the longest service record started work thirty-four years ago, in 1918.

Experience as a janitor is not required of job applicants, but each new man learns his duties by working with others on his squad, assisted by coaching from the group leader, who, incidentally, may be a college graduate. All this detail may further convey a fuller understanding of how and why the cleaning and maintenance program has attained its high level of efficiency.

One thing the sanitary maintenance department insists on is the best mechanical tools on the market, this rating being determined by practical operation of the devices during a pre-liminary controlled test period. It was in this way that one particular make of vacuum cleaner was selected and made standard equipment for all campus work. Three sizes, small, large and extra large, are now operated. Scrubbing machines were selected not only for performance, but for the ease with which they can be handled. The model used, it is claimed, "could be operated without strain by a child." University policy forbids mention of any brand names.

In push brooms nothing but "the best we can find" are used, Inspector Lyman stated. In searching for dry mops special attention was given to quality and performance of the yarn. Brands were changed several

times before one was found that has proven highly acceptable in performance, as well as a money saver from the labor cost standpoint, Mr. Lyman said. To clean dry mops use is made of a device called a "dust abstractor," invented by Mr. Lyman's predecessor, but which, it is understood, is not now available commercially.

Long study of wet mops showed that the 16 oz. size is "not practical for our work," Mr. Lyman claimed. He uses a 24 oz. size which he finds suitable for some situations, but strongly favors the 32 oz. mop because it covers larger territory.

How thoroughly every essential sanitation accessory is investigated before being adopted was indicated by Mr. Lyman's account of testing 65 brands of wax. Sixty of these were quickly discarded, then three more, and finally one particular type was settled on. It is a water emulsion wax, Mr. Lyman said. It is purchased, he said, on specification, and he also buys small quantities of other waxes for special jobs from time to time as the need arises.

Scrubbing soaps are bought in concentrated gel form by the barrel and reduced for use by addition of water. In refinishing a waxed floor, where the seal has been removed by steel wool, the scrubbing soap used in the followup is reinforced with trisodium phosphate, with excellent results, Mr. Lyman stated.

For cleaning slate floors in the majestic Rockefeller Memorial Chapel a special scrub soap is used which removes grime easily and also leaves a film that restores the luster of the flooring material.

In toilets a commercial cleaner is used on lips of urinals, also on other porcelain ware. It is "fool proof," Mr. Lyman claims, and will not damage surfaces where used. For some time, he said, he has been searching for a good cleaning compound that will do an effective low-cost job on marble surfaces.

No metal polish has been used for eighteen years, with considerable saving in manpower and cost of material and with what is claimed is an immense improvement in appearance of the metals. To clarify that statement you are told that under Chicago's lake shore climatic conditions brass and copper "weather out" beautifully and harmonize perfectly with Gothic architectural designs.



W. R. ZELLNER

Liquid insecticides are kept on hand for use in laboratories where monkeys, mice, hamsters and other live animals are used in experimental porjects. Dispensers are of the centrifugal type, some in large sizes for extensive space spraying, others operated by hand for small, localized exterminating jobs.

One corner of the campus no longer needing its former extensive insecticidal, disinfecting and deodorizing attention is the famous "House of 10,000 Mice," where a famous cancer research specialist conducted her protracted investigaions of the malady. This eminent scientist, it was learned, is now engaged in writing up her findings and the myriads of tiny cancerous rodents she had kept in cages through long generations have been liquidated, much to everybody's relief

For cleaning swimming pools and shower rooms a good commercial product is employed. Pool disinfecting is accomplished with a bromine injector device that dissolves tablets of the chemical and releases proper dosages into the pool at stated intervals. Disinfectants are also added to mop water used on gym floors.

Supplies for the sanitation operations, as for all other university uses, are bought through the institution's purchasing department. After a decision is reached on the type of material or brand desired, a purchase order is sent to the buying office. If the product is bought on specification, the buyer "shops around" for the best market price. Most maintenance supplies have been pretty well standardized and it has been found unnecessary to keep any large assortment on hand. New stocks are delivered to the University's "General Stores," which is managed by the purchasing department and from which they are released on proper requisition.

Suggestive of the size of some cleaning operations is the figure for washing interior walls last year. Needed supplies and materials cost \$478 and wages amounted to \$4,885. An idea of the volume of some sanitation supplies required to maintain the University's cleanliness standards can be gained from the approximate figures on last year's purchase of the following:

Cleaning soaps and detergents —\$1,400.

Liquid hand soaps-\$600.

Floor finishes, including seals and waxes—\$3,100.

Paper towels and toilet tissue—\$7,500.

Equipment, including mops, brooms, brushes, etc., and floor machines—\$3,000.

Full confidence is placed in the manufacturer's integrity, so no checkup is run on goods delivered on specification. On brand name goods the brand name is considered a sufficient guarantee of the product's merit as determined by preliminary tests.

In the field of waste disposal 380,710 lbs. of waste paper and 30,570 lbs. of fiber board were gathered up during last year, also 36,290 lbs. of baled tin cans from the college commons. Because of low market prices, this rubbish is now being given away to the junk dealer for hauling it off.

One problem involving waste disposal was brought to light when a report was laid on Mr. Zellner's desk during this interview. Some absentminded person, it seems, must have mistaken his office trash basket for a

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ECENT improvements in insect control have been accomplished by striking advances in methods of application as well as by the use of more publicized new insecticides. In outdoor control work the development of fogging devices, spray blowers and special aircraft equipment have permitted insect control programs to be pursued more efficiently and with notable savings in labor. Convenient sprayers and dusters as well as aerosol dispensers have largely replaced the hand operated spray gun for use in homes and small commercial establishments. Perhaps the nearest approach to push button

nsecticide

tion by electrical heaters is a recent development (Christopher and Spear 1951). The historical background for this method and some of the general considerations influencing its use have been described (Sweetman and Spear 1951, Spear and Sweetman 1952). The method employs the modern chlorinated hydrocarbon insecticides which are held in electrically heated containers at a temperature permitting slow, continuous evaporation. Apparently the first such device manufactured for this purpose in the United States was the porizers

well governed by the number of units installed, provided they are capable of accurately maintaining the desired rate of evaporation. For such performance extremely dependable thermostats are required as variations in voltage or surrounding air temperatures cause tremendous variation in rate of evaporation by heaters not so equipped. A thermostat must be skillfully engineered and properly situ-

insect control are the thermal generators (Interdepartmental Pest Control Committee 1951), electric vaporizing devices (Committee on Pesticides, American Medical Association 1952) or simply vaporizers. It is the purpose of this paper to point out some of the ways in which the safety and utility of

these devices may be enhanced.

The function of a vaporizer is to maintain throughout the space being treated a constant concentration of insecticide which will be lethal to flies in a reasonable period of time, but not dangerous to humans normally occupying the same space. The subject of human safety should not be ignored by anyone concerned with vaporization of insecticides. While this phase of the subject lies in the province of public health, there is no evidence to date to indicate that insecticide vaporizers when properly used have been deleterious to human beings.

Vaporization was among the earliest methods employed to disperse insecticides but continuous vaporizaAerovap which appeared in 1947 (Underwriter's Laboratories, 1947).

Vaporizers of many types are currently available in the United States. A few types are sold in Mexico, Canada and much of Europe. In the United States the former practice of leasing the units has been largely supplanted by direct sales. Such sales may be made by established pest control operators and specialists in the field who usually offer service contracts. On the other hand, unfortunately, vaporizers can be purchased by mail, in specialty stores or from itinerant sales-

#### Vaporizer's Function

RETURNING to our definition of the function of a vaporizer that it should maintain a concentration of insecticide which will be lethal to insects in a reasonable period of time-two elements are noted, concentration and time of exposure. In order to maintain an insecticidal concentration continuously in a given space the rate of evaporation of the insecticide must be meticulously regulated, and geared to the volume of air being treated. For large rooms the amount of insecticide evolved can be fairly

ated to reflect the temperature of the insecticide itself. In laboratory tests of a vaporizer with a poorly placed thermostat, it was found that evaporation was very rapid in the presence of moderate air currents but very slow when the unit was protected from air currents. Although the unit was expected to evolve one gram of insecti cide per 24 hours, actual daily weight losses varied from one-third to twoand-a-half grams. Where the room volume is less than 15,000 cubic feet an adjustable thermostat is essential in order that the rate of evaporation may be reduced to remain within the limit of one gram per 15,000 cubic feet per 24 hours established by the Interdepartmental Committee on Pest Control (1951).

It is the writer's opinion that vaporizers should be provided with a means of inspection during operation so that the rate of evaporation can be very closely estimated. While other factors affect the process of evaporation its rate is nearly proportional to the heat applied to the mass of insecticide. Obviously, the temperature should not be measured directly from the insecticide itself because both insecticides approved for use, Lindane and DDT, are subject to breakdown by a variety of foreign substances which might be introduced on a ther-

<sup>\*</sup> Based on paper presented at 38th midyear meeting, C.S.M.A., Boston, June 10, 1952.

mometer. In addition, Lindane, the more frequently used, coalesces into a cake when heated, preventing accurate measurement of the temperature of the insecticide itself. These difficulties can be circumvented, however, if provision is made for insertion of a thermometer to a point in the unit which will accurately reflect the amount of heat being applied to the insecticide. If the operating temperature of the unit is determined it is possible, with a graph to estimate rather accurately the rate of weight loss from the unit. Thus, with an inexpensive thermometer the owner or service man can determine that a vaporizer is operating in the margin between insecticidal effectiveness and human hazard.

#### Inspection of Vaporizer

IN THE same way that automobiles require occasional inspection and adjustment, so too, do vaporizers. Inspection of a vaporizer should consist of measuring the temperature to ascertain that the desired rate of weight loss is being maintained, and examination of the insecticide to make sure that it is in good condition and in adequate supply. The insecticide should be replenished at intervals frequent enough so that the unit at all times has at least a third of a charge of insecticide. In general, where the amount of insecticide is reduced below a third, the volume remaining is insufficient to permit the desired rate of evolution unless the temperature is adjusted upward. Such temperature adjustment is not desirable. Instead the cup should be recharged with insecticide. Further, it is our experience that the loss of weight which obtains after half the charge has disappeared is sufficient to reduce the heat transmitted to the insecticide.

If our ideal vaporizer is then properly engineered, inspected and maintained, we can expect it to produce the desired amount of insecticide constantly at a uniform rate. We must now look to the volume of air being treated. This is quite distinct from the space in which the vaporizer is installed. The volume of air being treated in a basement night club during "closed hours" is very different from the vol-

ume being treated in the same space while it is occupied and air conditioning units are in operation. Likewise, there is a tremendous variation in the air subject to treatment in the dairy barn in early spring as against the volume of air passing through the same barn on a breezy summer day. This is a subject which needs considerable investigation but by reference to heating and ventilating guides it is apparent that air changes may vary from five to several hundred times a day. Where excessive air changes exist as in some fan-ventilated buildings in warm climates or in buildings with very large door- and windowopenings, it is foolish to expect a vaporizer to permit the development of insecticidal concentrations safely. A vaporizer intelligently employed under the conditions we have discussed maintains an insecticidal concentration in the air being treated.

#### Fly Control Big Use

F THE hundreds of thousands of vaporizers now in the hands of the public, certainly but a relative few were purchased for any purpose other than fly control. This being the case, what position should be held by vaporizers in a fly control program? Vaporization is not the panacea of fly control but rather is a new, convenient and highly efficient method of applying insecticides. The emphasis which is being placed upon sanitation and screening in general fly control programs applies fully as well whether the insecticide is vaporized in a restaurant or sprayed upon the walls of a barn. Over four years' experience in the use of vaporizers leads to the belief that if properly constructed and operated, these devices are highly efficient in eliminating flies from enclosures but they must be given a fair chance to perform their task.

Effective fly control may not be achieved even though we provide a well-constructed, thermostatically controlled, and properly serviced vaporizer operating in a commensurate space subject to normal air change. The capabilities of the pest being combatted as well as the weapon employed must be considered.

The biotic potential of the

housefly has been the basis for the calculation of the number of million, billion flies that could be produced in one season by a single pair of flies. Such figures are no more comprehensible than the amount of the national budget, but in the same way that the saving of a few dollars can reduce the total sum so too will a little sanitation reduce the total number of flies. Regardless of the method of insecticide dispersal, sanitation remains the most important avenue of attack. This is particularly true in the use of vaporized insecticides as the slight concentration in the air has little, if any, effect on the immature stages of the housefly.

In three widely separated sections of the country it has been noted that the difficulties in fly control have occurred where sanitation was very poor. A female housefly, bent on laying eggs, can easily achieve her mission before succumbing to the insecticide. Given insanitary conditions, her eggs will produce a new crop of flies in a few days. Such conditions can be seen in dirty garbage containers, under or behind food handling counters and in many animal shelters. With new flies continuously being produced they may be present in sufficient numbers to be a nuisance before being affected by the insecticide. Such a condition gives the impression that the vaporizer is not functioning. It may also provide an excellent opportunity for the selection of a strain of flies highly tolerant of the insecticide. Field experience to date indicates that, with few exceptions, when a properly situated and operated vaporizer fails to control houseflies, there is continuous breeding in the immediate environment.

As adult houseflies live for several weeks, a small but constant source may produce a large population around a given premise. During the daytime. houseflies continually move about in search of food and resting places and they will attempt to enter a structure from neighboring and less sanitary areas. For this reason screens should be used on all doors, windows or other openings through which flies may enter. It is not enough merely to put up

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## Wax Remover Evaluation

By M. Martin Maglio and F. J. Pollnow, Jr.\*

Vestal Laboratories, Inc., St. Louis

HE dearth of published information on the subject of wax remover evaluation has prompted us to relate our experiences with a method developed in our laboratories and used extensively to investigate the merits of such agents. A brief search of the literature reveals no direct publication on the subject, as far back as 1918, except for a recently issued government specification (3) and still more recent publication by Trusler (7). The government method was not applicable to our purpose.

Our aim was to develop a method whereby the effectiveness of a wax remover could be measured. The objectives of Trusler and his co-workers were, on the other hand, "to determine under what conditions waxed surfaces can be cleaned without removing the wax and also under what conditions the wax can be removed without damaging the asphalt tile."

Coincidentally, the independent path of the present investigators ran parallel to that of Trusler, for initially we encountered similar pitfalls. We, too, found that the gloss of unbuffed, washed tiles could not be taken as an indication of the amount of wax remaining on them. Scrubbing dulls any remaining wax to a point at which it exhibits little gloss, thus resembling an unwaxed surface. Buffing rejuvenates the gloss and reveals the presence of wax, otherwise hidden.

Faced with the choice of using factory-unfinished tiles, which would not be representative of field conditions, or devising a method for removal of the factory finish without damaging the tile, we chose the latter course. This course was found feasible.

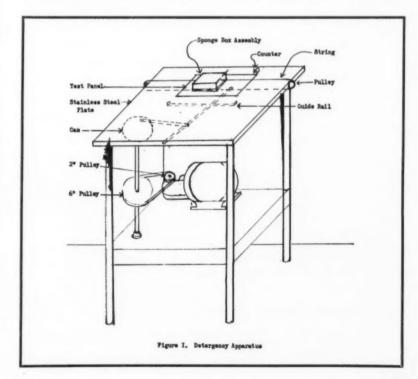
We employed a mechanical method to remove applied wax, so as to minimize personal and subjective errors; it is conceivable that applied pressure in a manual method might vary considerably with more or less wax removal, depending upon the direction of variance. Our mechanical method was standardized to provide an applied, constant pressure of 0.074 lb. per sq. in.

Whereas Trusler applied a known volume of wax to a unit area and calculated from the volume taken and its non-volatile content the dry weight of wax, we merely applied as uniform a film as possible and measured the wet film thickness by means of a Pfund gauge. From this reading, we calculated the dry film thickness

according to the method of Switzer (6). These calculated values were found to correspond within ±0.02 mil of the theoretical, with each coat of wax representing a dry film thickness of about 0.31 mil.

It is interesting to note that Trusler's group reported a gloss of 1.6 to 1.8 for the unwaxed black linoleum panels and that our average value for the scrubbed but unwaxed panels was 2.7, reasonably close to the former.

A satisfactory test method should simulate practical conditions and should yield results which can be duplicated under field conditions. Accordingly a test method for wax remover evaluation should utilize the surfaces and the waxes as well as the cleaning equipment and methods of



<sup>\*</sup> Paper presented at 38th mid-year meeting, C.S.M.A., Boston, June 10.

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cleaning encountered in actual practice. Where necessary, modifications in technique may be substituted so long as they do not affect the results significantly. We believe our method meets these conditions.

#### **Preparing Test Panels**

BLACK inlaid linoleum panels (1) were used in this investigation. The panels were trimmed to measure 53/4 in. by 53/4 in., so as to be accommodated in our detergency apparatus, Figure I. Prior to use, the panels were first brush-scrubbed with a commercial wax remover solution\* followed by a 0.25% solution of a suitable non-ionic detergent\*\*, rinsing between and after detergents. This treatment effectively removed the factory finish. The panels were then buffed to maximum gloss by means of a clean linen towel and gloss measurements were made, using the Photovolt photoelectric glossmeter standardized against a black onyx glass plate giving 96% relative light reflectance.

By means of folded, ordinary bandage gauze-moistened but not wetted with the wax-the panels were next given two coats of a 14% wateremulsion wax, allowing 24 hours drying time between coats and 72 hours after the last coat before testing. The wax was applied in light, even strokes and in one direction, similar to industrial application of a wax by means of a lamb's wool applicator. The wax used was known to have sufficient water resistance, yet adequate removability, through extensive commercial usage. The panels were polished to

\* 6 oz. of Vestal Dewaxer per gallon of water; any other proven wax remover should serve the

purpose.

\*\* Lavapol, trademark, General Dyestuff Corp.

maximum gloss and gloss readings taken on the glossmeter.

Initially some difficulty was experienced by the operator in the form of variable maximum gloss, but a little experience with the technique soon resulted in a maximum gloss of 50 ± 0.6%.

#### Apparatus

THE reader is referred to a recent publication by the senior author (5) in which the apparatus used herein was described. Similar equipment is available from H. A. Gardner Laboratories, Inc., Bethesda, Maryland.

#### **Test Solutions**

ROM our preliminary work it soon became apparent that a standard or reference wax remover was required for comparison. The potassium oleate soap described in a government specification (3) was selected as the standard. Its preparation was under our direct control, and its composition could be assured. The three wax removers evaluated in this study are described in Table I.

The removers were evaluated according to the manufacturers' instructions and, in the case of Remover A. increased concentrations were also studied to determine if wax removal could thus be increased to a point where it might become comparable to the standard. St. Louis tap water of 90 p.p.m. hardness was used to prepare the required dilutions. All solutions were tested at room temperature (25°C.).

#### Procedure

NE hundred fifty ml. of the test wax remover solution were poured into an enamel vegetable freshener pan, 14 in. long by 8 in. wide by 41/2 in. deep. The test panel was introduced into this solution, face down, and allowed to soak for 60 seconds. (Note: This technique was employed to simulate practical or field conditions, wherein a "use" solution of wax remover is allowed to remain in contact with the surface for a more or less designated time prior to scrubbing or mopping it). The panel was then removed and placed in position in the scrubbing apparatus. Meanwhile 50 ml. of the wax remover solution were poured over the cellulose sponge in the stainless steel box. (Note: The total weight of the sponge box assembly-including box, sponge, adjusting weights and 50 ml. of wax remover solution-was one pound. When the hog bristle brushes replaced the sponge, some adjusting weights were eliminated to maintain the total weight of the box assembly at one pound. The path of sponge travel was 3 inches by 53/4 inches.) The assembly box was set in place and the motor started. The sponge was allowed to pass over the test panel 100 times for 50 complete cycles, completed in just under 60 seconds. Approximately 6 ml. of wax remover solution were allowed to drip onto the test panel during the 50-cycle period. The test panel was then removed from the apparatus, rinsed thoroughly under running tap water and allowed to air dry. After buffing to maximum gloss, as described previously, the gloss was measured.

Hog-bristle brushes1 replaced the cellulose sponge in several experiments, but with little difference in results. When the brushes were used, the procedure was modified somewhat. The panel was scrubbed for 25 complete cycles in one direction, rotated through a 90° angle, and then subjected to another 25-cycle scrub, the latter scrubbing action being perpendicular to that of the first. Five ml. of wax remover solution were dripped onto the test panel during each 25cycle wash.

The wax removal factor for each wax remover was calculated from

Table I. Wax Removers Evaluated pH of Specific Gravity (at 25°C.) Wax Remarks Remover Solution 5% potassium oleate soap containing 1 ml. of 28% NH<sub>3</sub> per liter Standard 10.5 1.00 10.3 1.037 A commercial product consisting of an Remover A aqueous solution of a non-ionic detergent and a complex inorganic phosphate 0.985 Modified amine detergent compounded Remover B 10.0 with pine oil

<sup>&</sup>lt;sup>1</sup> H. A. Gardner Lab., Bethesda, Md. (special hog-bristle brushes for Model 105 Washability Machine).

Table II. Relative Wax Removals of the Standard Wax Remover vs. Wax Remover B and Varying Concentrations of Wax Remover A

Remover	Oz. Used per Gallon*	G <sub>3</sub>	W.R.F.	% R.W.
Standard	Undiluted	9.4	85.8 88.1 60.5 59.8	100
В	6	8.3	88.1	103
A	11.5	21.4	60.5	71
A	16		59.8	100 103 71 60 66
A	26	21.7 23.3	56.4	66

<sup>\*</sup> Number of ounces of wax remover used to make one gallon of solution.

the formula:

W.R.F. = 
$$\frac{G_2 - G_3}{G_2 - G_1} \times 100 (1)$$

where W.R.F. is the wax removal factor,

> G<sub>1</sub> is the gloss of the cleaned but unwaxed panel,

> G<sub>2</sub> is the gloss of the waxed panel prior to scrubbing and G<sub>3</sub> is the gloss of the waxed panel after scrubbing.

After numerous duplicable determinations  $G_1$  was assigned a value of 2.7 and  $G_2$  a value of 50, the latter applying only to the wax used in this study.

To stress the relationship among the W.R.F. values of a given series, we introduced the factor, relative wax removal (R.W.) calculated as follows:

% R.W. = 
$$\frac{\text{W.R.F.x}}{\text{W.R.F.s}} \times 100 (2)$$

where W.R.F.s is the wax removal factor of the standard remover.

Occasionally in different series we have observed slightly different W.R.F. values for the same concentration of wax remover against the same wax. On these occasions, a greater consistency was observed in the relationships among the R.W. values. Because of this, it is our opinion greater reliance should be placed on the latter.

Ten test panels were used for each wax remover or each concentration evaluated. The G<sub>3</sub> values (gloss obtained after scrubbing of the waxed panel) were averaged and substituted in formula (1). Subsequently, the R.W. values were calculated, as given in formula (2).

#### Experimental

OUR first aim in the evaluation of the proposed method was to determine if the method were capable of distinguishing between wax removers of varying quality. Table II presents the results of a series in which the Standard Remover was evaluated against Wax Remover B and varying concentrations of Wax Remover A. In this series, the 60-second pre-soaking of panels was eliminated and hog bristle brushes replaced the cellulose sponge as the scrubber.

The differences found between the Standard Remover result and those for the three concentrations of Wax Remover A are statistically significant, whereas the differences among the three concentrations of Remover A are not significant. Moreover, the differences between the Standard Remover and Remover B are likewise not significant.

Table III. Relative Wax Removals for the Standard Dewaxer and Removers A and B Using the Cellulose Sponge and a

Pre-soak

Remover	Oz. Used per Gallon*	G <sub>a</sub>	W.R.F.	% R.W.
Standard	Undiluted	6.4	92.5	100 107
В	6	3.0	99.4	107
A	11.5	22.4	92.5 99.4 58.4	63
A	16	21.0	61.3	66
A	26 .	3.0 22.4 21.0 20.0	63.4	63 66 69

<sup>\*</sup> Number of ounces of wax remover used to make one gallon of solution.

This experiment was repeated using the cellulose sponge as a scrubber. The 60-second pre-soak was also included. From the results given in Table III, the superiority of the Standard and Remover B is again demonstrated. These results closely confirm those obtained with the brush in Table II.

It is apparent that the substitution of the sponge and the inclusion of the pre-soak did not augment the wax removal properties of Remover A, whereas these revisions did assist the Standard and Remover B somewhat.

Again, the differences found between the Standard result on the one hand and those for the three concentrations of Remover A on the other are statistically significant. There is no significance between the Standard and Remover B results.

Our second aim was to determine if the method were capable of discerning between different concentrations of the same remover. For this purpose, Wax Remover B was selected. The W.R.F. and R. W. values found for this remover at various concentrations are given in Table IV and plotted in Figure II. In this series the 6 oz. per gal. concentration is used as the standard wax removal factor (W.R.F.s) for the purpose of computing the R.W. values of the other concentrations.

It is seen that progressively greater wax removal is obtained with increasing concentration of wax remover and that maximum wax removal is obtained at a concentration of 6 oz. per gallon. Further increases in concentration up to 10 oz. per gallon are of no apparent value.

These results, except for the 10 oz. per gallon concentration, were analyzed statistically by the Analysis of Variance (4) to determine if the differences shown are significant. For a detailed description of this analysis, the reader is referred to a recent publication (5). The t values found by analyzing our data are reported in Table V.

The standard t value for this series is 2.878. Any experimental t value exceeding 2.878 is statistically significant with a statistical probability

of 0.99 (99 chances in 100 of being correct), using both tails of the distribution curve for rejection purposes. Moreover, any experimental t value less than 2.878 is not significant. Thus, the difference found between 8 and 6 oz. per gallon is not significant, but the difference between 2 and 4, 2 and 6, 2 and 8, 4 and 6 and 4 and 8 oz. per gallon are all significant.

#### Discussion

THE degree of wax removal depends on several factors: 1) the nature of the wax to be removed, 2) the age and exposure of the wax film, 3) the nature (composition) of the wax remover, 4) its concentration, 5) the temperature of the "use" solution of wax remover and 6) the mechanical force applied.

We believe our method obviates the influence of most of these factors. The method specifies the age and exposure of the wax film and the number of coats. The mechanical force applied is standardized at 0.074 lb. per sq. in. and the temperature of the "use" solution is arbitrarily set at 25°C. The concentration of wax remover to be employed will vary with the manufacturers' instructions and hence is left open. The nature of the wax remover is dependent upon its ingredients and how they are blended or reacted and it is the effectiveness of this nature which is measured. The wax used should be a commercially acceptable wax which is removed with some difficulty. If it is too easily removed, it probably will have poor water resistance and thus will pass only the most lenient of specifications. Best practice probably would be to standardize upon a wax at the outset.

 $G_2$ , the gloss reading of the waxed panel prior to scrubbing, was found to be 50  $\pm$  0.6% in our case. Naturally, this is not a static value, one to be used for all waxes. Rather it will differ with the nature of the wax.

The use of lower gloss standards in the form of ceramic and rubber tiles, corresponding to 45 and 60% relative light reflectance, respectively, was likewise tried but essentially the same R.W. values resulted. In view of this, the higher gloss standard was retained.

Table IV. Relative Wax Removals for Wax Remover B at Several Concentrations\*

Oz. Used per Gallon	Ga	W.R.F.	% R.W
2	21.2	60.9	65
4	15.5		65 78
6	5.9	72.9 93.2	100
8	6.9	91.1	98
10	5.8	93.4	100 98 100

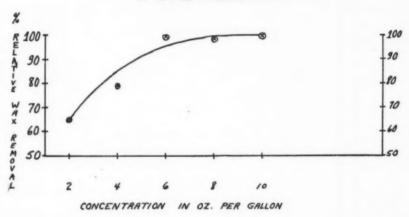
\* In this series the panels were not pre-soaked for 60 seconds, yielding somewhat higher Ga values. In a subsequent series, including the pre-soak, slightly lower Ga values resulted.

The effect of mechanical scrubbing on the gloss of unwaxed panels was likewise studied. Where the factory finish had been removed as previously described, mechanical spongescrubbing with a 6 oz. per gallon solution of Wax Remover B raised the

ers, revealing any real differences among their wax removal properties. In the application of the method, however, certain precautions must be followed to insure reasonably satisfactory results.

The factory finish on the lino-

FIGURE II. RELATIVE WAX REMOVAL FOR WAX REMOVER B



gloss from 2.7 to 3.5 (average of 5 panels); where the factory finish had not been removed, mechanical sponge-scrubbing increased the gloss from 3.0 to 3.9. In the face of our results, these increases were considered negligible and no correction was applied.

#### Conclusion

OUR data reveal that the wax removal test described is satisfactory for the evaluation of wax remov-

leum should be removed before waxing. Secondly, care must be exercised in waxing the panels so as to apply an even and uniform coating of wax. If desirable, a Pfund thickness gauge (2) may be used to determine the thickness of the wet wax coating, computing therefrom the thickness of the dry coating (6). Our experience shows that an operator can reproduce fairly

(Turn to Page 163)

Table V. t Values Calculated for Detergency Results Found Using Varying Concentrations of Wax Remover B

	8 oz./gal.	6 oz./gal.	4 oz./gal.	2 oz./gal
8 oz./gal.	_	1.02	5.10	8.72
6 oz./gal.	1.02	-	6.12	9.74
4 oz./gal.	5.10	6.12	_	3.60
2 oz./gal.	8.72	9.74	3.60	_

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## Thirty years of

### **Automotive Chemical Specialties**

By A. E. Moore\*

Director, New Products Development Division R. M. Hollingshead Corp.

HEN I entered the chemical specialty field in 1923 by joining the laboratory staff of R. M. Hollingshead Corp., Camden, N. J., products such as harness dressing, harness soap, saddle soap, leather inks and axle grease were still considered "hot" items. Of all the hundreds of such products made by Hollingshead at that time, only one product, saddle soap, survives.

Long before I arrived the company was busy making many products designed for use on, in and around automobiles. The change over from "horse and buggy" products started just about the time automobile horns began sounding.

Carriage top dressing was changed quickly to automobile top dressing, coach polishes became automobile polishes, and axle grease was changed to cup grease. The Hollingshead company was not caught napping and did not find itself in the sad position of the buggy whip manufacturer who was complaining about low sales at their annual sales meeting. The sales curve on the wall chart ran way past the bottom-line and was headed for the floor. Looking at his salesmen, he exclaimed, "I just can't understand it-we still make the best damn buggy whip in the world!"

The change from "horse and buggy" products to automobile products was an important step. However, it was not a sudden, overnight shift, because like all new ideas or gadgets, the horseless carriage had to be sold. For many years, the automobile was a novelty and a curiosity. Many people said they would never replace the horse, and it was a never-ending source of satisfaction to those diehards to be able to shout "Get a horse!" whenever the early automobile refused to move.

Today, our highways are filled with modern, streamlined, fish-tailed mechanical marvels complete with radio, radio phones, push buttons, gadgets by the score, and air conditioning soon to come.

#### **Automobile Sales Rise**

S TATISTICS published in the Chilton publication, Automotive Industries, show the growth of automobile sales. These figures also show the trend of demand for products designed for use on the automobile.

In 1900 the total number of automotive units sold was 4,192.

In 1910 the total number sold was 187,000.

In 1920 the total number sold was 2,227,349.

In 1950 the total number sold was 8,003,045.

The total registration of all types of motor vehicles in the United States for the year 1951 was approximately 51,347,000 units. In 1921, the total registration was only 10,493,000 units. The total registration of all types of motor vehicles in the world for the year 1951 was approximately 73,000,000 units. These figures show that the United States has approximately 70 per cent of the total registered units. The first five states in order of registration are:

 California
 4,768,000

 New York
 3,851,000

 Pennsylvania
 3,306,000

 Τεκαs
 3,118,000

 Ohio
 2,893,000

It is interesting to note that the State of California has almost one million more vehicles than New York State, which is second in line.

Today's market for automotive chemical specialties is \$1,000,000 automotive vehicles, or 73,000,000 if you sell abroad.

The products available to the car owner of today are quite different from those sold 30 years ago. Most of today's chemical specialties are products of the laboratory and are far superior in quality and efficiency than those early products. Research by automotive engineers has given us today's high-powered, efficient automobile. Research by the petroleum industry has given us the modern fuels and lubricants so necessary for its efficient operation. Research has also produced the automotive chemical specialties which preserve the beauty, and improve the performance of the present day automobile.

One of the important items we produced in the "twenties" and "thirties" was radiator anti-freeze. Most of it at that time was made from denatured alcohol and glycerine. We produced one of the first non-evaporating types of anti-freeze, which was known as "Gold Band" which was mainly processed from defoamed glycerine. This was considered a successful product. So what happened? Well, ethylene glycol stepped in and glycerine stepped out as an anti-freeze. Alcohol is still being sold as anti-freeze today, but ethylene, propylene and other glycols have taken over the permanent antifreeze market.

Soap for washing automobiles was at the time an important item

<sup>\*</sup> Presented at 38th mid year meeting, C.S.M.A., Boston, June 9, at which time the author was elected chairman of the newly formed Automotive Division.

with Hollingshead, and also with many other manufacturers. Today, synthetic types of detergents are sold as automobile washes and shampoos, and have practically replaced soap for this purpose. Why? Because they are superior to soap for washing automobiles.

The first automobiles were trimmed profusely with brass, which had to be polished. That required a brass polish. Next, the brass was nickel plated, so that, naturally, required a nickel polish. Nickel has been replaced with chromium, with the resultant demand for chromium cleaners and polishes. Now, it appears that a lot of the chromium is being replaced by stainless steel.

Due to Government restrictions on the quantity of chromium which may be used for certain types of trim on automobiles, thinner coatings are being applied. This has resulted in the development of a new chemical specialty, designed to extend the life of the thin chrome plating. Such products are sold as chromium protectors, and there are several good ones on the market today.

Remember auto top dressings? Such dressings represented a large volume of business, because most of the early automobiles were of the opencar variety and had tops made of leather, mohair, fabrics, pantesote, etc. These tops all required dressings to keep them looking attractive and to increase their life. The open car was gradually replaced with the closed car with the soft tops. This introduced closed car top dressing. Today, with the exception of the convertible, most cars have metal tops, so top dressing is no longer an important item.

Polishes for automobiles have changed greatly in thirty years. There are three reasons for this:

- (1) Many changes have been made in automotive finishes. Lacquers replaced enamels. Synthetic types of fast-drying lacquers and enamels were developed and adapted to production line use.
- (2) The desire of the polish manufacturer to keep in step with the changes made in automotive finishes.
- (3) The discovery or development

of new raw materials for use as ingredients for automobile polishes.

Probably the first automobile cleaner was soap and water. The first automobile polish no doubt was mineral oil. Then, someone discovered that oil and water emulsions did a fair polishing job. The next improvement consisted of the addition of abrasives, such as silica, tripoli and diatomaceous earth, to the emulsion type polish. Various mild alkalies or acids were added to increase cleaning efficiency. Later, better results were obtained by the use of two separate products, namely, a paste type cleaner, somewhat similar to the rubbing compounds sold today, and a paste wax. Such products are still being sold, and they do a good job, but the more modern liquid-type cleaners and liquid waxes are much in demand because they are easier to use and give good

Another very popular type of product is the combination cleaner and polish, which cleans the surface of the automobile and deposits a protective coating at the same time. These polishes may include in their formulations vegetable, mineral, or synthetic waxes, resins and silicones to produce the desired protective film. The use of wax as a protective coating is not a modern development because its use dates back many centuries. L. Schwarcz in his book "Sanitary Products" states "In the tombs of the Pharaohs have been found paintings covered with filaments of wax which have preserved colorings for 4,000 years. The Greeks well understood the desirability of wax for it was often used on their statuary, in their temples, homes, etc. Pliny relates that wax was useful to the Romans in protecting walls and weapons. To beeswax and turpentine is credited the lovely patina of furniture of the Stuart as well as later Queen Anne, Hepplewhite and Sheraton periods.

"Parquetry floors in France were kept lustrous with wax as early as 1500. The servants bound their feet in cloth and skated up and down the floors to bring up the desired lustre. Floors in ancient French chateaux, treated with wax, survived the traffic of centuries, mellowing in beauty, whereas untreated stone steps leading to the entrances were worn."

#### Silicone Polishes

HEMISTRY has produced the marvelous silicones which have received a lot of attention from automobile polish manufacturers during the past three years. Today there are scores of polishes and waxes on the market containing this material. Due to the high cost of silicones, some of the products sold today can be said to be only slightly "contaminated" with them. Good results can be obtained by the use of a sufficient quantity of the right type of silicone in an automobile polish or wax, but experience has shown that the formula has to be built around the silicone. You can't add a silicone to any formula and expect good results.

Tune-up oils, break-in oils, carbon removers, upper cylinder lubricants and gasoline additives represent a large volume of automotive chemical specialty sales today. Similar products have been sold for over thirty years. One of the first of these highly advertised products was known as "Boyceite."

I recall a story told me by a friend who was always trying to find ways of cutting down gasoline consumption. He stated that by using an upper cylinder lubricant he was supposed to save 25% gasoline. By using a certain brand of motor oil he was guaranteed a saving of 20% gasoline. Special gear lubricants would save another 25%. By using a highly advertised gasoline he would be able to save 20%, and by installing a special gizmo on his carburetor he could save another 30%. All of these savings added up to 120%. His problem was: How could he keep his gasoline tank from overflowing?

About 1924, Chrysler corporation began installing hydraulic brakes on some of their automobiles. This opened up a new field for the chemical specialty manufacturer, and he jumped in with both feet. Today, hydraulic brake fluids for automobiles represent one of the most important automotive chemicals. The first brake fluid used was a mixture of castor oil

and alcohol, which was covered by the Malcolm Lougheed patent issued in 1925. This type fluid is still being sold today, more than a quarter of a century after it was first introduced. In 1930, a patent was issued to R. M. Bagley and assigned to Hollingshead, which covered the use of castor oil and ethylene glycol monoethyl ether. This was one of the first high-boiling type brake fluids, and it represented quite an improvement over the alcohol types.

A few years ago, the Society of Automotive Engineers established two specifications for automotive brake fluids. One was for a Moderate Duty fluid for use in an atmospheric temperature range of 130 degrees F. to minus 20 degrees F. The other specification covered Heavy Duty fluid for use in an atmospheric temperature range of 140 degrees F. to minus 60 degrees F. Automobilie manufacturers and reputable brake fluid formulators generally accepted and adopted these specifications, and such fluids are readily available. However, there are still many brands of brake fluid on the market today which do not meet either of these specifications. Such fluids are made to meet a price and not a specification. Brake fluids of poor quality can be dangerous to the user, and should not be offered for sale.

From a brief review of United States patents granted on brake fluids, it can readily be seen that the inventors and formulators have been striving hard to produce better fluids. The results of their efforts have given us excellent fluids, having high boiling points, high flash points, low cold tests, and superior anti-corrosion characteristics. Automobile manufacturers have been alert to the possibility of improving year round brake performance by the use of improved brake fluids. A recent independent survey of car manufacturers revealed that the majority of them are now installing heavy duty type brake fluids in passenger cars as well as in heavy duty vehicles. The reason for this is obvious. Heavy duty fluids, because they are high boiling (300 deg. F. min.), are far more stable than those made from low boiling ingredients such as alcohol. They

also can be used over greater extremes of temperature.

Hydraulic brake fluid in my opinion is the most important chemical compound used in the operation of an automobile today. Some people may argue that gasoline or motor oil are more important. The point is this-an automobile will stop when it runs out of gasoline or oil, but it won't stop if it runs out of brake fluid. It just keeps rolling along! Today's combination of high speed automobiles, modern high speed highways, and fast drivers require an efficient set of brakes. A smoothly operating braking system requires the use of a high quality hydraulic brake fluid in addition to proper adjustment to keep it at top efficiency.

Car manufacturers are continually improving the braking system of the automobile. We, in the chemical specialty field, should do no less than keep in step, or, better still, keep a step ahead and provide hydraulic brake fluids which will give that extra margin of safety to today's fast-moving horseless carriage.

#### **Two Specialty Classes**

ENERALLY speaking, automo-G tive chemical specialties may be divided into two classes: Maintenance chemicals and Performance chemicals. Under maintenance chemicals can be grouped such items as: radiator cleaners and flushes, radiator stop leaks, automobile polishes, automobile waxes, automobile cleaners, chromium and metal polishes, touch up enamels, engine enamels, tire coatings, upholstery cleaners and spot removers, glass cleaners, washing compounds, tire cleaners, and degreasing compounds.

Under performance chemicals may be grouped such items as: hydraulic brake fluids, tune up oils, carbon removers, anti-freezes, radiator rust preventives, gasoline additives, lubricants, penetrating oils, valve grinding compounds, cements and sealers, and tire and tube patches. Many other products might be added under each

One of Hollingshead's sales slogans has been "Whiz products make your car run better and look better!" I believe this is the goal of the entire

industry. We at Hollingshead have been earnestly trying to live up to this slogan by a continuous research and development program aimed at improving and adding to our group of prod-

As many of you know, Hollingshead manufactures a large volume of products under private brands. These brands bear the names of automobile manufacturers, oil companies, tire companies, chain stores, sales organizations, etc. Many of these companies maintain well-equipped laboratories and constantly test products made for them. You can readily see that it was very necessary for us to establish and maintain quality standards on all products we manufacture.

#### **Product Specifications**

W ITH this in mind, long ago we prepared detailed specifications for all raw materials we use and for all products we manufacture. All such testing is done in a central control laboratory. No product made is filled into containers until all specified tests are completed and the batch is released to the production department by the control laboratory. An analysis report, showing results of all tests, is filed with the mixing record of the batch. A sealed sample of each batch is filed for future reference and periodic examination. In addition to the checking done by the control laboratory, we maintain an inspection department to spot check containers on the filling lines. Scores of products are manufactured for the various Government agencies under their specifications. Such products cannot be produced successfully without strict laboratory supervision.

One important angle of chemical specialty development, which is sometimes neglected by manufacturers, is the proper shelf testing of a product before it is put on the market. We have found, and most specialty manufacturers will agree, that shelf testing pays big dividends by eliminating a lot of future problems. Certain types of accelerated tests have been developed over the years, which give correct answers in relatively short periods of time.

(Turn to Page 159)

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The physical stability of a product should be checked carefully. Excessive separation of important ingredients will ruin the working properties of the best product, because the user does not always shake the container sufficiently, even though you tell him to do so.

#### Formulator's Task Easier

THE specialty formulator today has a relatively easy task as compared with that of the chemist of thirty years ago. In the old days, when an emulsifier was needed, the chemist made one by cooking up a mess of smelly soap. Today, the formulating chemist has his choice of hundreds of wonderful compounds, such as the amines, ethylene oxide condensation products, sulphonates, etc. Chemical coupling agents are readily available to increase stability of products. Many new types of solvents, such as the glycol ethers, the aromatics, and the aliphatics, are readily available to the chemist of today and aid him greatly in building new and useful products.

Wetting agents (or I should say surfactants) of the non-ionic, cationic and anionic types have been developed during the past 25 years which can be used in aqueous and nonaqueous systems to increase detergency penetration and lubricity. Such materials have added important tools to the toolbox of today's formulator. Today, some formulators don't even have to formulate—instead, they get in touch with the nearest raw material supplier and request a suitable formula. If it happens to work to his satisfaction—he is in business!

Yes, things have changed greatly in the past 30 years. When I went to school, we were taught that the atom was the smallest indivisible piece of matter. It required a great war and great scientific effort to change our thoughts on that subject and to prove that the atom can be split. The chemical specialty manufacturer is now making use of nuclear fission materials to prove to his customers that his product is good. Radioactive isotopes are now in use and are proving that oils lubricate, that detergents clean and that automobile polishes protect.

Today, a laboratory can be easily equipped to prove the products you manufacture are good. Such equipment as the Weather-o-meter, humidity and salt spray cabinets, cold chambers, machines that measure lubricity, abrasion testers, the SAE stroking test apparatus, which in less than a week will show approximately how a brake fluid will perform in about 25,000 miles of driving, are available to the laboratory for evaluating products. Today, the gloss or shine produced by a polish can definitely be rated and recorded. Thirty years ago, we had to do it the hard way-there wasn't such a gadget as the gloss meter available.

Many new innovations in the construction of automobiles may be expected in the next 20 years. Experiments are now under way, testing various types of plastics combined with glass fibers for use in making automobile bodies. Acrylic plastics could no doubt replace all of the glass used in the construction of an automobile. Airplanes use them. Such changes will require new types of polishes, cleaners and protective coatings.

Air-cooled engines if ever widely used may reduce the demand for anti-freeze. Sealed cooling systems may eliminate the need for such products as radiator cleaners, rust inhibitors and stop leaks. New and improved types of automotive finishes may possibly curtail the demand for polishes and cleaners. However, if such drastic changes do come, you may be sure the automotive chemical manufacturer will still be in there pitching, dreaming up some combination of molecules to make cars run better and look better.

#### Suggested Aerosol Fills

Recommended fills of artificial snow-type aerosols was the subject of a resolution adopted at the recent Boston meeting of Chemical Specialties Manufacturers Association. The Commercial Practices Committee of the Aerosol Division resolved that the following size packages of various can makers are recommended to be filled with not less than the following amounts by weight, in the filling of pressurized artificial snow: 12-ounce can of American Can Co., 12 ounces; Continental Can Co.'s 12-ounce, concave and dome styles, 12 ounces; 12ounce can of Crown Can Co., 12 ounces; American's dome or flat-top, six-ounce can, six ounces; Continental's dome six-ounce can, six ounces; and Crown's squat or tall, six-ounce can, six ounces. A similar resolution had been previously adopted by the committee to cover insecticides and room deodorants.

#### **New Sprayer Display**

A new counter or floor display carton has recently been introduced to retailers by Acmeline Manufacturing Co., Traverse City, Mich. It contains 32 hand sprayers, 12 each of the quart and pint sizes in the intermittent type, and eight of the continuous quart size.

The carton, made of heavy corrugated board, is a combination shipping case and display-and-storage case, opening up to provide a colorful slanting display top. This leaves the back open where the sprayers are so arranged that any one can be taken out without disturbing the rest. The case is offered to the dealer without additional charge.



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#### **Bar Detergents**

(From Page 45)

Table V summarizes the performance of this bar and Bar No. 30:

Both bars have excellent lather in tap and sea waters. However, Bar No. 275 gives a creamier, more stable lather. Both bars show no apparent change on exposure to 75 percent relative humidity, but Bar No. 30 is less hygroscopic. They both absorb more water at 100 percent relative humidity, but still remain fairly firm, with a thin soft outer layer.

The bars are satisfactory in regards to skin detergency and shaving. In tap water, they are comparable with a high grade toilet soap for shaving, although toilet soap and Bar No. 275 give a creamier, more stable lather than does Bar No. 30. Both bars can be used satisfactorily for shaving in cold sea water. Under such conditions, of course, it is almost impossible to work up a shaving lather with toilet soap. Bar No. 275 was finally chosen over Bar No. 30 for further work because of a more soap-like slip, somewhat higher and more stable lather, better clarity of solution, and greater availability of tallow soap.

Slightly more than 1,000 fourounce and 2,000 two-ounce bars were manufactured in full-scale commercial soap-making equipment in which a standard procedure of milling, plodding and stamping was used. Some difficulty was encountered in the initial milling as compared with regular soap. This difficulty was primarily due to the Aerosol AY which is in the form of a tough, plastic mass, thus making it difficult to mill in with the other ingredients. It is felt that the procedure can be modified or the AY be used in

a different physical form in order to overcome this difficulty. Once the milling had been completed, the additional operations such as plodding and stamping were carried out with ease. The manufactured bar is very similar in its properties to those of the same composition prepared in the laboratory, except that it is smoother and more homogeneous in appearance and in feel. In handwashing it leaves a slightly sticky feel after use, but much less than that obtained with an alkylbenzene sulfonate-soap bar.

In addition to the tests already described, Bar No. 275 was evaluated for cotton detergency and dishwashing. Table VI depicts the results obtained in a laboratory evaluation of cotton detergency in a single cycle test (18) employing cloth padded with GAF Synthetic Soil. (10)

In Easton tap water (60 p.p.m. hardness) it is slightly inferior in detergency to tallow soap and "Antarate AV-236," a mobile laundry detergent, but virtually equal to Antarate AV-236 and slightly superior to tallow soap in whiteness retention. In sea water, it is somewhat inferior to Antarate AV-236, but superior to tallow soap. When consideration is made for the fact that Antarate AV-236 was designed specifically for cotton detergency in all types of water, it can be concluded that Bar No. 275 is satisfactory as a cotton detergent where this function is of secondary impor-

Bar No. 275 was evaluated for dishwashing in the laboratory by washing dishes soiled with a mixture of shortening and flour. It is effective in removing this soil in all types of water. It is not quite as good as tallow soap in Easton tap water but much better than tallow soap in 300 p.p.m. hard-

ness water and in sea water. As compared with a synthetic detergent, Bar No. 275 is definitely less effective than "Igepal CO" in Easton tap water, 300 p.p.m. hard water, and in sea water. It is concluded that Bar No. 275 could be used effectively for cleaning mess gear in soft, hard, or sea water.

After 11 months of storage through humid summer and dry winter conditions, Bar No. 275 still has a smooth soap-like appearance, with no evidence of blooming or of cracking, and at no time during this period did it exhibit undue softness or brittleness. When used for washing and shaving, it likewise does not exhibit undesirable pitting, blooming, slushing, or crack-

Thus, from the standpoint of lather, skin detergency, shaving, cotton detergency, dishwashing, physical characteristics, and ease of manufacture, it is concluded that Bar No. 275 is a satisfactory all-purpose bar for use in soft, hard, or sea waters.

The authors wish to express their appreciation to Dr. W. Craig White, Quartermaster Corps, Dr. R. Paul Schreiber, Quartermaster Corps, and to L. F. Hoyt, Dr. F. D. Blair, Dr. T. H. Vaughn, and C. A. Gault, members of the National Research Council Subcommittee on Bar Detergents, for their helpful suggestions concerning our work for the Quartermaster Corps on the development of an all-purpose bar.

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#### Table VI-Cotton Detergency and Whiteness Retention in Easton Tap (60 p.p.m.) and Sea Waters

	Tap Water		Sea 1	Sea Water	
Detergent <sup>1</sup>	Detergency <sup>2</sup>	W.R. <sup>2</sup>	Detergency	W.R.	
Antarate AV-236		80.9	75.2	79.8	
Bar No. 275		80.9	72.4	78.5	
Tallow Soap	76.8	79.5	70.5	78.5	

AUGUST, 1952

Concentration of Detergent: 0.25%

Final Reflectance of Washed Swatches

#### SYNTHETIC DETERGENT FILE



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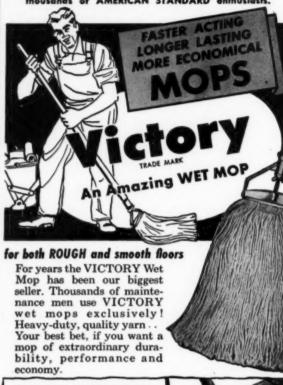


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#### CMC

(From Page 52)

CMC has a slight resistance to soiling and a marked ease of washing after soiling. These data were confirmed by semipractical soiling work and by full-scale laundry trials in turn. CMC is also shown to be a more effective stiffening agent than starch.

The extreme ease of washability of CMC-sized fabric has been utilized in commercial laundries to allow greatly reduced quantities of soap, bleach, and alkali, thus effecting savings in linen supply work by increasing fabric life and reducing replacement costs. Several laundries have solved a finishing problem by using CMC as a light size for "no starch" sport shirts to provide ironing ease and a neat finished appearance. CMC solutions are being used in home laundries as a highly effective sizing agent which promotes ease of washing.

#### Acknowledgment

THE authors gratefully acknowledge the assistance of Dr. R. W. Little of Hercules in designing experiments and in the writing of the manuscript, and of George A. Reasor of Hercules who performed much of the laboratory work. The help of various personnel from the American Institute of Laundering, particularly R. B. Mitchell (now with B. T. Babbitt, Inc.) and L. G. Johnston, is also much appreciated.

Appointment of James R. Turnbull, Monson, Mass., as assistant general sales manager of the western division of Monsanto Chemical Co., St. Louis, Mo., was announced recently by Edward Schuler, division general sales manager.

#### Wax Removers

(From Page 153)

consistent wax films, but that different operators do not necessarily duplicate themselves. We found the average dry film thickness to be 0.31 mil per coat (8). Other methods of application including the Fisher Payne Dip Coat Method or the application by a doctor blade may prove superior with respect to eliminating the operator variable.

For purposes of comparison, a standard wax remover should be used in each series. Also, the wax currently in use or contemplated should be employed, since it is this wax which must be removed in maintenance.

The laboratory results obtained in the application of this method have been substantiated in the field, where the Standard Wax Remover and Remover B were also shown to be superior to Remover A.

It is our recommendation that a minimum of 8 test panels, preferably 10, be used for each remover. It is our further recommendation that the data be analyzed statistically to avoid undue influence of occasional, widespread variations.

The test wax must be primarily a wax, must be wax-like in nature, having the essential characteristic of buffability. It should not be a socalled "hard" wax, which is essentially a dispersion or solution of resins plasticized with a little wax.

It is conceivable that thin films of remaining wax might exhibit gloss comparable to that produced by thicker films. Thus, the method might suggest equal wax removal where, in actuality, there would exist a considerable difference. Such an eventuality is tentatively contraindicated by the results in Table IV for varying concentrations of Wax Remover B.

The method described has been found useful in our laboratories in the development of improved wax removers as well as in the evaluation of competitive products.

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#### Disinfectant Soaps

(From Page 107)

very badly. It must be recognized that most disinfectants have a bactericidal spectrum and are more potent against one class of organism than other. For general purposes those with the greatest all-around activity and widest sphere of effectiveness should be employed. The solution of the problem, therefor, does not lie in rendering tests like the Rideal-Walker test more accurate, but to modify them to yield more complete information even at the expense of a certain amount of reproducibility. For soaps and compounds made for a specific purpose, and used in a specific way, some flexibility should be shown by the authorities in defining tasks they should be able to perform before the compound can be called disinfectant.

It is suggested that a soap be considered disinfectant if a 5 per cent to 10 per cent solution can be shown to kill a mixed skin culture at 37° C. in the presence of organic matter and in less than one minute. This suggestion has at least the advantage of trying to define the disinfectant activity in terms of ability to do the type of task for which it was intended. There is no doubt that if the official type of test based on the Rideal-Walker technique designed for phenolic disinfectants is involved, soaps which can be demonstrated to have very effective germicidal properties cannot be thus openly claimed and labelled because they do not meet the requirements laid down for "carbolic" acid solutions intended for sterilizing drains.

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### News

#### **Averill** in New Post

American Sanitation Institute, St. Louis, Mo., recently announced the appointment of an additional sanitarian



BRYCE S. AVERILL

to its staff in the person of Bryce S. Averill. Mr. Averill comes to the Institute from Continental Baking Co., where he was in charge of the sanitation program. Previously he was associated with the U. S. Public Health Service, and with the Saginaw, Michigan Health Department.

Mr. Averill works out of Detroit, under the new program which the Institute has recently inaugurated of stationing men in key cities throughout the country. His address is 31755 Grand Traverse, Wayne, Mich.

#### Offers Germicidal Wax

A germicidal floor wax for use on hospital, dairy and institutional floors was recently announced by Solarine Co., Baltimore.

#### Starts Sanitation Firm

S. G. Osborne, formerly of S. G. Osborne and Associates, Fort Wayne, Ind., recently announced his intention to start a sanitation and chemical business in south and central Florida. He is anxious to contact makers of equipment, chemicals and janitor supplies, and is most interested in specialties and private label items.

The firm will stock and handle its own accounts, and will represent national manufacturers on an exclusive direct basis, furnishing warehouse space if mutually desirable. Mr. Osborne may be reached at P. O. Box 232, Allapattah Station, Miami 42, Fla.

#### Sterwin Elects Whiteside

Robert S. Whiteside, formerly assistant director of Sterwin Chemicals, Inc., New York, has recently been elected vice-president. Before joining Sterwin, Mr. Whiteside was associated with various firms in the food field.

#### Smith Joins Diversey

Diversey Corp., Chicago, has announced appointment of Stephen G. Smith as manager of sales for maintenance products, including cleaners, disinfectants and other items for institutional and industrial use. Mr. Smith was formerly assistant manager of bulk shortening sales for Lever Bros. Co.

#### Mellocraft, Van Nest Merge

Consolidation of Mellocraft Co. and Van Nest Supply Co. was announced recently. The new organization is to be known as Mellocraft Co.; its new address is 1320 Locust Street, Toledo 4, Ohio. The new quarters consist of five floors of approximately 60,000 square feet of space.

#### Risk Hollingshead V.P.

Appointment of Thomas H. Risk, formerly research engineer for the Ethyl Corp., New York, as vice-president, was announced recently by R. M. Hollingshead Corp., Camden, N. J. In his new position Mr. Risk serves as assistant to Wilbur H. Norton, president, on matters relating to new product developments. He collaborates with Thomas J. Bagley, executive vice-president of research on new product development projects.

Mr. Risk, who has moved to Camden from Detroit, joined Ethyl Corp. in 1940. During World War II he was consultant to the Army Ordnance Department. He was credited, while engaged in war duties, with responsibility for improving gasoline by controlling hydrocarbon type with respect to boiling range.

Hollingshead laboratories, under the direction of Mr. Bagley, carry



T. H. RISK

on research in hydraulic fluids, window cleaners, waxes, floor finishes, lubricants, corrosion preventives, insecticides, automobile radiator products, plastics, and atomic energy.

#### Carbon Tet Labelling Law

The Board of Health of the City of New York recently added a new section to the sanitary code requiring that any cleaning preparation containing carbon tetrachloride be labeled with special warnings against danger and misuse. Under the law all products containing carbon tetrachloride except fire extinguishers must bear the following warning statement on the front panel of the container in conspicuous lettering: "Carbon tetrachloride or contains carbon tetrachloride, danger, hazardous vapor and liquid, may be fatal if inhaled or swallowed, do not take internally, do not breathe vapor, use only with adequate ventilation, avoid prolonged or repeated contact with skin."

According to Dr. John F. Mahoney, commissioner of health and chairman of the board, this action was taken to prevent further illness and deaths from use of carbon tetrachloride cleaning compounds which killed at

least 12 New Yorkers last year.

Since hundreds of thousands of labels of carbon tetrachloride cleaning preparations have to be replaced and the required warning added, the Board of Health made the effective date of the new regulation December 1, 1952 in order to give the industry an opportunity to make the necessary label changes.

Where stocks of carbon tetrachloride are found without the required warning label after December 1, 1952 in the City of New York, the dealer will be subject to prosecution for violation of section 222A of the sanitary code. Violation of the code is a misdemeanor punishable upon conviction by a fine not exceeding \$500 or imprisonment for a period not to exceed one year or both. After December 1, 1952 the Health Department will embargo all stocks of carbon tetrachloride preparations which do not bear the required warning label.

#### Columbia Shows Vaporizer

Columbia Chemicals Co., Chicago, displayed and demonstrated its Columbia Insecticider for vaporizing insecticides at the Chicago convention of the National Candy Wholesalers Association, recently. Lew Waldron, head of Columbia, was in charge of the booth.

#### **Rat Bait Station Offered**

"Rattunnl" bait station, containing one pound of "Redi-Mix Warfarin" bait, was recently introduced by Hopkins Agricultural Chemical Co., Madison, Wis. A telescoping box pulls out in three sections to an overall length of 16 inches. Three perforated windows on each side are removed and provide access to the bait. The product retails at \$1.25.

#### Sonneborn Advances Three

I. Silverman, former assistant manager of the Nutley, N. J., plant of L. Sonneborn Sons, Inc., New York, was recently appointed factory manager to succeed the late P. Dettelbach. At the same time it was announced that H. Riess has been named assistant factory manager, and A. Moscowitz chief chemist.

#### Chicago Rat Drive Under Way

HICAGO health authorities began a city-wide drive on July 14 to rid that city of its rat population. Preliminary operations with crews using calcium cyanide gas were started in a limited middle class residential area and, after developing experience and understanding of conditions encountered, the project will be expanded block by block until the city's entire 214 square miles of corporate area are covered. Municipal exterminating activities will be restricted to public alleys and a strip four feet wide on abutting private property.

Owners of rat-infested property will, however, be notified to rid the premises of rodents, rat-proof all structures and provide tight-lidded metal garbage containers for use by tenants. Under a recently enacted new ordinance, if owners fail to comply within 15 days, the city is empowered to enter the premises, do all necessary exterminating and rat-proofing and attach a lien on the property to cover costs.

Arthur E. Marks, former U. S. Public Health Service officer, who, earlier was appointed rat control officer for the Chicago Board of Health, is directing the project. Acting with him in an advisory capacity is a committee representing three city governmental departments: health, buildings and streets and alleys. Also the Illinois state and Cook county health departments, U. S. Public Health Service, American Medical Association, Chicago Council of Social Agencies, Illinois Pest Control Association, churches, civic and community business groups.

Complete cooperation has been promised Mr. Marks by the Illinois Pest Control Association, in an official reversal of its long-standing opposition to any city-wide rat control project conducted by any governmental agency.

This new position, was taken, it was announced by Joseph De Fiore, of Globe Exterminating Co., and president of the Illinois Pest Control Association, after conferences with city health authorities which cleared up fears, based on past Chicago experiences, that the city's drive would be controlled by vote-hungry politicians. The pest control industry, too, anticipates some direct benefits, through calls for their services from property owners who are forced to comply with the new cleanup ordinance.

#### Discuss Sulfur Quotas

Pesticide Formulators Industry Advisory Committee recently recommended to the National Production Authority that export quotas for ground sulfur and sulfur containing formulations be adjusted to permit the export of such materials not needed domestically. The committee recommended that provisions of NPA's sulfur order M-69 remain unchanged, limiting consumption of sulfur for agricultural purposes to 90 per cent of 1950 usage. According to the committee current domestic demand of sulfur for such purposes has fallen considerably short of estimates, owing to dry weather, especially in cotton growing areas, having reduced customary infestations by agricultural pests.

#### "Pellent" Spray Offered

Andy Lotshaw Co., Chicago, manufacturer of "Pellent" insect repellent cream, is introducing "Pellent spray, a pressure type can containing the repellent.

#### **New Merchandising Plan**

Meakins-McKinnon, Inc., Lockport, N. Y., manufacturers of cocoa
mats, recently announced a new guaranteed merchandising plan for their
"Mat-A-Door" mats. Each mat is
tagged with a customer guarantee, and,
according to the company, is the
world's only guaranteed mat. The mats
are bordered in colored braid and packaged in dozen lots for handling and
shipping.

"Mat-A-Doors" are manufactured in three basic styles: light brush, medium brush and heavy brush. Other brush styles and sizes are also available.

#### **Rodent Control Broadcast**

Harold Noble, vice-president of S. B. Penick & Co., New York, and Prof. Carl Paul Link of the University of Wisconsin presented a roundtable discussion on rodent control which was broadcast by "Voice of America" on July 31. The discussion which covered chiefly large scale rodent control with warfarin lasted for 15 minutes and was beamed to the British Isles, Germany, other parts of Europe and North Africa.

Prof. Link, discoverer of the anti-coagulant rodenticide powers of warfarin, handled scientific phases of the broadcast while Mr. Noble outlined the history of the use of the material in rodent control in the United States and other commercial phases. He also described the successful control of rats throughout the sugar plantations of Hawaii and in Cuba, previously an unsolved plague, by the use of warfarin.

The original round-the-world "Voice" broadcast has been rearranged for a rebroadcast in native languages to all countries of the Far East, Middle East, and throughout Latin America. When the rebroadcast program is completed it will cover the full scope of the "Voice of America" broadcasting range.

#### **Accepts Dieldrin Label**

Acceptance of the label for dieldrin insecticide produced by the Julius Hyman & Co. division of Shell Chemical Corp., New York, was announced recently by F. W. Hatch, manager of the Hyman division. The U. S. Department of Agriculture has accepted the label, allowing the outdoor use of dieldrin for control of adult houseflies, mosquitoes, mosquito larvae, salt-marsh sand fly larvae, ticks, chiggers and fleas. Dieldrin formulations for these newly approved uses are meant to be handled only by or under the direction of trained personnel, such as pest control operators, public health officials, and mosquito abatement district officials, Mr. Hatch pointed out. The use of the insecticide with the "strip method" for application in dairy barns and other farm buildings where spraying of dieldrin is

not permitted is allowable. With the "strip method," strips of fine mesh screen are dipped in a dieldrin solution and fastened at given spacings or surfaces that have been found to be attractive to flies, such as door entrances, ceilings, etc.

#### **AMA Looks at Toxaphene**

Toxaphene is the subject of two articles in a recent issue of the Journal of the American Medical Association. One article, written by the committee on pesticides of the AMA states that toxaphene sprays are not considered safe for household application. The second article by Drs. Lemuel C. McGee, Howard L. Reed and James P. Fleming says that the absence of poisoning in workers who manufacture toxaphene and in those who are exposed to it, both in the compounding of pesticides and in its use suggests that it can be handled with safety. Accidental, careless, or injudicious use, and careless misuse have resulted in several deaths and numerous cases of poisoning, the report states.

#### **Approves Coined Names**

The Interdepartmental Committee on Pest Control recently approved isodrin as a coined name for the insecticidal chemical 1,2,3,4,10,10hexachloro-1,4,4a,5,8,8a-hexahydro-1, 4,5,8-endo-endo-dimethanonaphthalene. This formula is identical to aldrin, except that aldrin is the endoexo isomer. Isodrin has been known as experimental insecticide No. 711. The word, endrin, has been approved by the committee as a coined name for 1,2,3,4,10,10-hexchloro-6,7-epoxy-1,4,4a,5,6,7,8,8a - octahydro-1,4,5,8 endo-endo-dimethanonaphthalene. This formula is identical to dieldrin, except that dieldrin is the endo-exo isomer. Both names are agreeable to ACS.

#### New Wax-Type Lubricant

A new wax-type lubricant for cutting metals has recently been announced by S. C. Johnson & Son Co., Racine, Wis. One of the advantages claimed for the new cutting oil, "Wax-Cut," is its transparency, which permits the operator to watch the work in progress.

#### Lowers Allethrin Prices

McLaughlin Gormley King Co., Minneapolis, recently announced lower prices on allethrin. MGK's new schedule for this material for drum lots, freight paid is as follows:—allethrin, 100 percent, \$32 per pound; 90 percent, \$28.80 per pound; solution, 20 percent, \$6.65 per pound; and solution, 2.5 percent, \$7.40 per gallon.

#### **Carnauba Institute Planned**

Establishment of an Institute of Carnauba Wax has been proposed to the federal congress of Brazil, it was reported recently. The purpose of the institute would be to control the classification, exportation, and price of the wax in order to increase production and provide for wider industrialization of the industry.

#### **Atlas Opens in Houston**

The opening of a new office in Houston, Tex., to serve the Southwest, was announced recently by George J. King, director of sales of the industrial chemicals department of Atlas Powder Co., Wilmington, Del. Allen V. Riley, Jr., has been assigned as technical sales representative to the new office, which is located in the River Oaks Building, 3273 Westheimer Road, Houston.

#### Gair Co. Names Mullen

Robert Gair Co., New York, recently named Edward K. Mullen sales manager of its boxboard division. Mr. Mullen was on Gair's New England sales staff prior to his new appointment.

#### Offers Adjustable Dolly

A new two-bucket adjustable carrier, the "Poly-Dolly", was introduced recently by Market Forge Co., Everett, Mass. Die-formed, steel platforms of this truck are adjustable and capable of carrying two round or oval buckets from 14 to 44 quarts in capacity, one for detergent solution, and one for rinsing. Adjustment of the handle to any position is made possible by a friction clamp. The dolly features two-inch rubber tired, ball bearing casters and five protective rubber bumpers.

#### **New O-Cedar Vice-Presidents**



B. T. DUCEY



R. E. SMITH

O'Cedar Corp., Chicago, has just announced election of Bernard T. Ducey and Robert E. Smith as vicepresidents. Mr. Ducey has been sales manager since July, 1950 and in the same year Mr. Smith was made advertising manager. Both will continue in these positions.

#### **Dorsett Co. Expands**

Dorsett Chemical Co., Baltimore, recently equipped several thousand feet of space in its plant at Curtis Bay for the production of paint and carbon remover. According to Rowell R. Dorsett, owner of the firm, expansion to other lines is being planned.

#### Pest Control Film Released

Completion of a 16mm color and sound motion picture entitled "Livestock Pest Control" was announced recently by California Spray-Chemical Corp., Richmond, Calif. It is available on request for showings to such organizations as livestock associations, agricultural groups, schools, 4-H clubs, etc.

#### **Heptachlor Now Available**

Heptachloro - tetrahydro - 4,7 - methanoindene, generally referred to as heptachlor, is now available to insecticide manufacturers and packagers as dust, emulsion and wettable powder concentrates, according to a recent announcement by John Powell & Co., New York. Heptachlor, a development of Velsicol Corp., Chicago, is being prepared by Powell in the form of

special concentrates designed for formulation into finished dusts and sprays. The firm's technical service department has prepared a bulletin covering the processing of heptachlor for these purposes. It is available from Powell's New York office.

#### **BHC** Plants in Brazil

Three plants in Brazil are currently producing benzene hexachloride, and output is said to be approximately 6,100,000 pounds per year (12% gamma isomer basis). Two manufacturers are said to have facilities for expansion of output and expect to increase production in 1952.

#### **New Bait Station**

Motomco, Inc., New York, displayed models of a newly designed warfarin bait station at the recent Chicago convention of the National Confectioners Association, with W. H. Dolben, president of the corporation in charge of demonstrations. A small plastic model for protection against mice was placed on the market recently, Mr. Dolben said, while a larger model for rats will be available shortly. The devices are being promoted in industrial fields, particularly in food processing, dairy, baking and candy

plants, breweries, warehouses and food retailing shops, where, due to Food & Drug Administration activities, keen interest is being stimulated in rodent control. "Black Leaf" ready mixed warfarin-oatmeal baits, for which Motomco is agent, are used with the stations.

#### S.C.I. Elects Curtis

Francis J. Curtis, vice-president and director of Monsanto Chemical Co., St. Louis, was recently elected president of the Society of Chemical Industry at its general meeting in Aberdeen, Scotland. He is the seventh president elected from the American section by the parent society. Members of the Chemical Specialties Manufacturers' Association heard an address by Mr. Curtis at their recent Boston meeting.

#### **New Moore Soap Dispenser**

A new model soap dispenser featuring a tri-metal finish of copper, nickel and satin-finish chrome has recently been added to its "Tanc-Typ" line by Moore Brothers Co., New York. The new design, "500 C", holds 40 ounces of liquid soap, and features the standard Moore liquid valve, said to operate 200 times per ounce. Installation of the unit does not require any plumbing connections. Model "550 C" is similar to "500 C" but has the Moore lather valve.

#### Isco Sales Symposium

Innis Speiden & Co., New York, held a three day sales symposium in New York recently. All managers and sales personnel from New York, Boston, Gloversville, Philadelphia, Cleveland, Cincinnati and Chicago attended. J. A. Schade, laboratory supervisor and technical consultant at the Jersey City plant, also sat in on many of the discussions.

D. S. Cushman, vice-president, presided over the meetings, whose prpose was to bring the sales organization up to date on new products and future plans of the company. In addition, each sales department manager discussed with the group his respective products, their uses and potentials.

#### Sanitary Chemicals at British Fair

By F. V. Wells and L. Beaumont

MONG the new and important soaps, detergents and sanitary chemical products shown at the recent British Industries Fair, London, were the following:

Soaps and Detergents: A few cosmetic firms, such as Innoxa Laboratories and Potter & Moore, showed milled toilet soaps as part of their normal lines. Harry Green, Ltd., well known in the U.K. for their nationally advertised "Broadcast" and "Mary Drake" toilet soaps, displayed these lines, as well as a new item, the "Mary Drake" guest tablet. These small-size, concave-convex cakes are produced in six different colors and perfumes. Special, attractive packages export of Mary Drake soaps were also shown. Harry Green Ltd. additionally specializes in making brand name soaps for the trade and department stores at home and overseas, and is particularly noted for their lifelike range of animal and other "soap sculptures."

Peter Lunt & Co. Ltd., showed a wide range of toilet, household and powder soaps, polishes, cleaners, toothpaste, etc. Their new "Flotsam" line is an elegant, white floating soap. They also showed a "Dolly Duck" soap and a "Brer Rabbit" novelty.

Newton, Chambers & Co. Ltd., makers of "Izal" disinfectant, demonstrated "Zalpon" washing cream, an olive green, thick cream, said to be made from a blend of soap "with the finest toilet detergents." It lathers well even in the hardest water, and a little removes grease and grime. Owing to its viscosity it is less to be wasted than ordinary liquid soap. The bottle in which Zalpon is marketed is unsealed, inverted and locked into position in the white, stoveenamelled aluminum and stainless steel dispenser. The chromium-plated dispensing lever is set to give a predetermined dosage.

Several important firms that produce synthetic detergents were represented at the Fair, including Shell, Manchester Oil Refinery, AngloIranian, Marchon Products, Laporte, etc.

One of the most widely used syndets in the U.K. is Shell Chemical Co.'s "Teepol X," a liquid secondary sodium alkyl sulphate containing some 20 to 25 per cent of the active salt. Powder and paste modifications are also marketed. Shell was exhibiting at the Fair but concentrated mostly on new intermediates and agricultural products.

Another very well known synthetic detergent manufacturer, Marchon Ltd. of Whitehaven, showed its "Empicols" (primary fatty alcohol sulphates) and "Nansas" (alkyl aryl sodium sulphonates.) Two of Marchon's newly introduced lines are "Empicol L.Z." needles, a form of sodium lauryl sulphate. Instead of being a spray-dried powder, it is in the form of needles, somewhat similar in appearance to vermicelli. These needles contain the same high concentration of sodium lauryl sulphate, approximately 90%, and the advantages of this form over the normal powder product are claimed to be as follows:

 Easier to pack and ship because it has about three times the bulk density, and therefore takes about one-third of the packing space.

(2) Completely non-dusty and therefore easy to weigh and measure both in the plant and laboratory.

(3) Contains far less entrained air than does the powder form, and therefore it is much easier to dissolve in water. This may sound surprising because one would normally expect a fine powder to be more easily dissolved, but such is not the case. The needles sink in the water, are easily stirred in and dissolve without any trouble, aeration or foaming. The powder material on the contrary tends to float on the surface of the liquid and is very difficult to stir in.

(4) The needles are completely non-sternutatory and this fact will be appreciated by anyone who has had experience of handling finely powdered sodium lauryl sulphate under factory conditions.

The other newly introduced

Marchon product is "Nansa H.S." flake, an alkyl aryl sodium sulphonate (80%) in flake form—based on the tetra propylene polymer.

Another firm whose activities extend to sulphated fatty alcohols is Laporte Chemicals, Ltd. This firm specializes in hydrogen peroxide and a large number of other peroxy compounds. Their ammonium persulphate and benzovl peroxide are used for oil bleaching and their sodium perborate and percarbonate in bleaching soap powders. They also exhibited, at the Fair, some of their washroom supply products (soap blends), synthetic detergents for laundry use, alkaline builders, liquid laundry blue, spotting and stain-removal agents, laundry wax and sours, etc.

Pesticides: Of most direct appeal was the display of Shell Chemicals Ltd., with its syndets, solvents, intermediates, lubricants, insecticides, larvicides, herbicides, fungicides, plant growth regulators, etc. Particularly impressive was the "Shell Spraying Calendar" and a pamphlet styled "Better Gardening and Shell Chemicals." The first of these deals with the treatment of all the common fruits, vegetables and flowers throughout the year, informing the user what Shell product he should use and when and how to use it. The short list of products referred to in this booklet are the firm's Universal Petroleum D N C Winter Wash, 35 per cent D D T Wettable Powder, 5 per cent D D T Dust, Dispersible Sulphur, Liquid Derris, Copper Fungicide, Lime Sulphur and Derris Wettable Powder.

Bugge's Insecticides, Ltd. featured a couple of dozen booklets and pamphlets, some in foreign languages, relating to their comprehensive range of insecticides, weedkillers, etc. Pidero is listed as a non-poisonous insecticide. Bugge's also make all the usual DDT, BHC, derris, sulphur, parathion, copper and nicotine sprays. Also shown was Fumite, a DDT/lindane low priced, non-tainting smoke insecticide, penetrating, safe and simple to use, and effective against all common greenhouse pests except red spider. Other insecticides produced by this

(Turn to Page 171)





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concern include toxaphene (made under U. S. license).

Disinfectants and Polishes: Among the products that Monsanto showed was new "Syton 2X," a colloidal aqueous dispersion of finely divided amorphous silica, containing 30 per cent solids as SiO, and having a particle size of 250 Å. Among other applications, Syton 2X is recommended for imparting slip resistance to floor polishes. Monsanto also showed "Santomerse" (wetting agent for spray formulations) and various other insecticidal agents. Their Santomerse, a sodium alkyl aryl sulphonate, is currently one of the most popular syndets in the U.K. A leaflet, "Monsanto Germicides," containing a brief summary of the characteristics and uses of their benzyl cresol and chlorinated phenols, was distributed.

Furmoto Chemical Co., Ltd. specializing in the manufacture and marketing of polishes and cleaners, featured a new item: "Solitaire" white leather cleaner, a non-inflammable emulsion for cleaning white shoes, belts and other leather goods. They also showed a whole range of suede leather cleaners and shoe polishes, as well as a reptile skin polish, a canvas and buckskin cleaner, sports leather dressings, dry cleaners, auto polish, metal polishes, a glass cleaner and demister, etc. Their "Furmoto" non-slip floor cream is intended for use on rubber and asphalt tile floors. It is sold in small cans and in larger sizes up to 5-gallon drums.

#### Issues Jet Mixer Data

A catalog describing jet mixers used with processing of various chemicals was issued recently by Barrington Engineering Corp., New York. The machines are said to handle a wide range of liquid viscosities from water thin materials through heavy bodied emulsions and dispersions as high as 30,000 centipoise. They are specifically designed for wet mixing liquids, and solids and for emulsifying, homogenizing, and dispersing applications, according to the catalog. They are available with interchangeable rotors and stators which are said to be easily maintained and replaced.

#### Varley in Europe

James Varley, chairman of James Varley & Sons, St. Louis, sailed from New York August 1 on the



IAMES VARLEY

S.S. America for a two month stay in Europe. He will spend most of his time in London and at Cleckheaton, near Bradford, Yorkshire, his birthplace. He will return to New York aboard the *United States* leaving England on September 25.

#### Jack Wels Dies

Jack Wels, treasurer of Twin City Shellac Co., Brooklyn, and brother of Arthur Wels, president of the company, died July 20.

#### **Chemical Sterilization**

Abolition of the differential between the use of chemicals and steam for sanitization of utensils on the dairy farm score card used by the Health Department of the District of Columbia was ordered recently to become effective Oct. 31, 1952. The change was made in Commissioners' Order 301,272/21 of the Government of the District of Columbia, signed by G. M. Thornett, secretary to the Board of Commissioners.

#### Louisiana Pesticide Law

Passage of Louisiana House Bill No. 591 covering sales of pesticides and its signature by the Governor were announced recently. The bill, which goes into effect Jan. 1, 1953, includes optional labelling, annual registration and annual fees of \$10 for each pesticide registered. According to the Chemical Specialties Manufacturers Assn. the law is now very close to the model bill, and is reasonably uniform

with the requirements of other states. Most of the objectionable features of the original bill have been eliminated, according to C.S.M.A.

Elsewhere along the legislative front a revised form of the "power of attorney" required before registration under the recently adopted Economic Poisons Act of the state of Mississippi is expected. This would limit assigned power to the Economic Poisons Act only. Manufacturers are urged by the Chemical Specialties Manufacturers Assn. not to sign the present form.

#### Chemical Imports for 1951

According to a recent report by U. S. Tariff Commission listing U. S. imports of coal-tar products in 1951 this country imported 3.4 million pounds of refined naphthalene. Principal sources were Germany, Japan, Belgium, and the Netherlands. Imports of ortho-cresol amounted to 778,000 pounds, of which the United Kingdom was the chief source. The U. S. imported 11,023 pounds of BHC and 88,184 pounds of DDT during 1951. Imports of rust inhibitors totalled, 2,469 pounds, and of liquid spot cleaner, 2,016 pounds.

### Campus Cleanup

(From Page 146)

filing case or storage cabinet. Anyway, if he wondered what became of all those little vials, half filled with sulphuric acid and methodically arranged in a large box, the paper sorters could have told him. They found this stuff in the day's accumulation of rubbish just before it was due for crushing in the baler. You can talk and talk and send out unending safety bulletins, but strange thinks like this still occur, commented Mr. Zellner.

Mr. Zellner, on whose shoulders falls responsibility for all phases of plant and campus maintenance, holds a 1927 degree of electrical engineer from the University of Cincinnati. He became associated with the University of Chicago eighteen years ago as assistant chief electrician. Two years later he advanced to electrical engineer, a post he held ten years. Six





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years ago he was made assistant superintendent of the department of buildings and ground and after four years was advanced to the superintendent's position, in which he is now entering his third year.

One matter causing considerable anguish in the sanitation sector is the University's rigidly controlled budget system. It is a matter of record, Mr. Zellner explained, that the service departments bear the brunt of budget reductions by being limited to a smaller proportion of total operating funds than are the academic groups.

That, he explained apologetically, is why the window washing operation on the campus is now limited to one a year. Time was, he said, when those 16,000 windows got washed six times a year. But, university financing being what it is, he had to reduce this schedule, first to four, then to two, and now, with a rueful sigh, to just one each twelve months. Last time the windows were cleaned it cost \$8,621.67.

Like others in the field of sanitation service who have been interviewed in Chicago from time to time for this magazine, Mr. Zellner and Mr. Lyman do not have a high regard for sanitary supply salesmen. In their understandable eagerness to sell, salesmen, Mr. Zellner observed, will insist that their product is the "best on the market" and, regardless of any exact knowledge, will prescribe it as the one "sure fire" material for every possible situation in its field of application.

They seem, however, to lack precise understanding of how it will work out under actual specified conditions, he charged, and their suggestions and recommendations are sometimes "way off base." Salesmen's claims are never accepted at face value, anyway, he pointed out. Decisions on every product adopted are always made only after thorough practical trials, as described.

"We try to keep abreast of all new developments that have possible merit for our purposes," said Mr. Zellner. "Often, too, when a problem arises which we cannot solve, we call on several manufacturers whom we feel might be able to help us.

"We find their technical experts always very helpful and cooperative, but we still insist on our own independent appraisal of their recommendations. Even if this is favorable, we still have the further problem of considering costs. Since our funds are limited, every responsible executive around the University of Chicago must watch the pennies and make the best possible use of what is made available to him."

#### Vaporizers

(From Page 148)

screens. It is essential that they be properly fitted and constantly maintained. One often neglected point is that screen doors should open outward so that any houseflies resting on the door will be scared away when the door is opened, and not driven into the building.

At this point the reader may feel that the problems involved in the successful use of a vaporizer in insect control are too complex to be practical. To use an earlier analogy, the automobile, although a complex machine, is used and operated by millions of people with little trouble because of the availability of service and maintenance by persons skilled and trained in its servicing. The several considerations which have been discussed with regard to vaporizers are intended to permit interested persons to use them to the best advantage. Their continuous, automatic action against houseflies and many similar insects is attested to by their wide acceptance in the field.

#### Vaporizer Restrictions

A S AN automobile must be oper-ated within laws which protect both the operator and others, restrictions on the use of vaporizers are coming into force. The Interdepartmental Committee on Pest Control (1951), consisting of representatives of the several agencies of the Federal government which are concerned with use of insecticides while safeguarding public health, has listed restrictions to be employed in the use of vaporizers. In addition to the maximum rate of use of one gram per 15,000 cubic feet per

24 hours already mentioned, this statement limits use of vaporizers to commercial and industrial structures where human exposure will be discontinuous. Their location is restricted to above head height and not less than three feet from ceilings and in such a manner that condensates cannot cause food contamination. It is clearly stated that the insecticides used are poisons which are dangerous if carelessly or ignorantly used. Further precautions indicated include the use of a fuse to prevent excess rate of evaporation and a pilot light to show that the device is working. According to a recent statement by the Committee on Pesticides (1952) insecticides for use in vaporizers are registered under the Federal Insecticide, Fungicide and Rodenticide Act only if they are to be used in vaporizers which comply with the recommendations of the Interdepartmental Committee. Intra-State authorities are reported to be considering adoption of laws and regulations which will incorporate most or all of the recommendations of the Interdepartmental Committee.

When operated within necessary laws, skillfully made and operated insecticide vaporizers permit automatic control of insects without interference with the normal use of spaces being protected. They are especially useful in the control of houseflies and similar pests of nuisance or public health importance found in a variety of commercial or industrial establishments.

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tion of insecticides with special reference to DDT. Jour. Econ. Ent. Sweetman, H. L. and P. J. Spear 1951. Vaporization of insecticides. Proc. IXth International Congress of Ent., Amsterdam.

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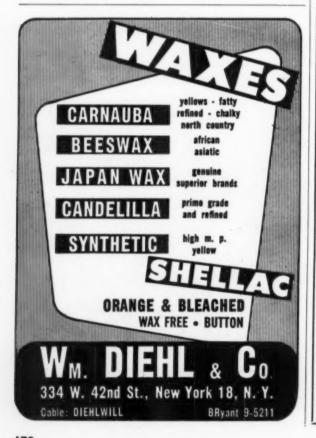
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Southern Sales: Executive maintenance supply salesman of proven ability covering states from Texas to Florida inclusive, interested in a small line or item sold to janitor supply houses and paper jobbers. Address Box 585, c/o Soap.

#### Miscellaneous

Wanted: New England Private Formula Work. Will manufacture, package, warehouse and distribute your product from our own or your material. One ounce to drum size. Glass, plastic or metal containers. Liquids, paste, cream or powder. Technical assistance supplied. Also facilities for grinding, blending, and crushing. Will subcontract on government contracts. All dealings held in strictest confidence. Forest Hills Chemical Co., Inc., 31 Rand Street, Roxbury 25, Mass.

Wanted: February 1952 issues of SOAP & SANITARY CHEM-ICALS. Will you help out technical library urgently in need to complete file. Send to Box 543, c/o Soap.

Will purchase Immediately: Pneumatic Packaging Machine, used for chips, powder, cleanser; also dry mixers, chip dryers, crutchers, and automatic soap press. Address Box 586, c/o Soap.

Standard Reference Books: See pages 80 and 81

#### Miscellaneous

Bought - Sold - Traded: Para, DDT, BHC, naphthalene, pyre-thrum; other chemicals, oils, waxes, colors, etc. Chemical Service Corp., 92-06 Beaver St., New York 5, Tele.: HAnover 2-6970.

Wanted: Kettles, frames, pul-verizers, cooling rolls, chip dryers, plodders, cutting tables, evaporators, packaging units. Will consider idle or operating plant. P. O. Box 1351, Church St. Sta., New York 8, N. Y.

Soap Plant Wanted: We are now manufacturing over \$20,000,000 in various lines and wish to expand by acquisition of assets or stock of one or more industrial companies. In our negotiations the seller's problems and wishes will receive full consideration. Present personnel will normally be retained. Address all replies "Confidential." C. J. Gale, Sec., 233 Broadway, N. Y. 7, N. Y. BA 7-1819.

#### For Sale

For Sale: 15,000 cases (more or less) new empty 8 oz. bottles-24 to case-distressed stock. Will accept fair offer. Bruner Bonded Warehouse, Box 1087, Alamo, Tex.

For Sale: Complete soap or sanitary chemical plants. Also individual items such as crutchers, plodders, mills, mixers, presses, dryers, filling equipment, etc. R. Gelb & Sons, Inc., State Highway No. 29, Union, N. J.

Are You Posted on SYNTHETIC DETERGENTS and SOAPS & DETERGENTS? see page 81.

#### For Sale

Equipment For Sale: Glycerine Distillation Unit, capacity 2 tons per 24 hours; Glycerine Sweetwater Concentrator, capacity 2500 gals. per 24 hours; Fatsplitter, 100 lbs. per square inch working pressure made entirely of type 316 stainless, 2500 gallon size; Three-Roll water cooled mill: Three-Roll Granite mill: Vertical Jones soap press; Dough mixers, 5 bbl. size; Tanks, wood, steel, stainless, 500 to 10,000 gal.; Plodder, 10 inch; Filter presses 18, 24, 30 inch; pumps, compressors, condensors, etc. Please reply to Box 587, c/o Soap.

Bargain: Machines made to order for Latin American customers unable to obtain import licenses, now available at 25% below list prices: 1 straight line can filling machine with 4 automatic filling valves, 1-3/16" OD filling spouts for cans from 1 to 5 gal.; 1 straight line can filling machine with 4 automatic filling valves, 7/8" OD spouts, for cans up to 1 gal.; 1 piston filling machine for jars and collapsible tubes; 2 tube closing machines for tubes up to 11/4" diam.; 1 straight line bottle filling machine with 6 automatic filling valves to fill sprinkler top bottles. Manufacturer will adjust machines to your individual production requirements. Fully guaranteed. Address Box 588, c/o Soap.

For Sale: Viscolizers and homogenizers, completely rebuilt and guaranteed and with late type stainless steel sanitary heads and pressure valves. Also rebuilt machines with standard heads and valves good used machines. Send for bulletin and prices. Otto Biefeld Co., Watertown, Wis.

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Standard Knapp 429 Carton Sealers; Jones. Ceco Carton Sealers. Standard Knapp 429 Carton Sealers; Jones, Ceco Carton Sealers. Campbell BW6 Auto. Cellophane Wrapper. Package Machinery FA, FA4; Scandia, Hayssen 3-7 Wrappers.

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#### For Sale

Latest Book on MODERN CHEMICAL SPECIALTIES . . . see page 80.

For Sale: Proctor & Schwartz 6-Fan automatic soap chip dryer, 2-roll chilling unit, large roll 48" dia. Empire State foot presses. Soap frames. Allbright-Nell 4'x9' chilling rolls. Lehmann 4-roll W.C. 12"x36" steel mill. Houchin 8-1/2"x16" 3-roll and 18"x30" 4roll Granite stone mills. Kettles and tanks, iron, copper, aluminum and stainless. Dryers vac. & atmos. Jones automatic soap presses. Slabbers and cutting tables, hand & power. Crutchers, Six-knife chipper. Filter presses 12" to 42". Wrapping & sealing machines. Powder, paste & liquid mixers. Rotex sifters. Filling machines. Grinders. Hammer mills. Colloid mills. Three-roll steel mills 8"x22" to 16"x40". Portable elec. agitators, pumps, etc. Send for bulletin. We buy your surplus equipment. Stein Equipment Co., 90 West Street, New York 6, N. Y. WOrth 2-5745.

For Sale: 1500 & 3000# Soap Crutchers; Wrapper type S; P&S rolls; 3&5 roll Mills; 10" Plodder; Pdr. Mixers; Fillers; Dryer; other items. I. E. Newman, 5602 Blackstone Avenue, Chicago, Ill.

For Sale: 1-4' x 8' steel flaking or cooling roll; Union Bag sewing machine, 80500 DZ head, M.D.; Sperry 24" Recessed cast iron filter press; Shriver 30" plate & frame C-1 filter press; Sperry 30" aluminum P & F filter press; Munson 2000 lb. rotary batch mixer; 1-Houchin Perfection jacketed crutcher, 3000#; 1—Std. Knapp self-adjusting gluer-sealer and compression unit; 100 lb. jacketed soap crutcher; 1—Day No. 71S/S Roball Sifters; Size 11, 23, 43 and 53 Rotex screens; Dopp 350, 650 gal. jacketed, open kettles; Jones automatic "K" soap press; 1—Houchin #4 para block press; Mikro No. 1 and No. 2 Pulverizer; 1-Wolf 1800 lb. ribbon blender; 18 Aluminum storage tanks, 800, 600 and 250 gals.; Special-27 unused rectangular 200 gal. aluminum storage tanks at only \$75 each plus \$15 crating. Only a partial list. Send us your inquiries. We buy your idle machines. Consolidated Products Co., Inc., 15-21 Park Row, New York 38, N. Y. Phone BArclay 7-0600.

#### For Sale

For Sale: Evaporator, Swenson . . . used, good. New cost approximately \$17,000. As is, where is . . . \$3450. Extruder, double worm, stainless steel die head and worms. Doering Mfg. New cost approximately \$5700. As is, where is . . . \$1850. Stainless steel jacketed tanks and kettles, many sizes . . . write your needs. Kelly & Co., 2701 Olive St., St. Louis 3, Mo.

For Sale: 20-bbl. soap crutcher; 600# jacketed horizontal ribbon mixer; 50# to 2000# horizontal ribbon powder mixers. Broughton 50 cu. ft. double arm powder mixer. Steam jacketed steel mixing kettles. Stainless steel steam jacketed kettles. Stainless steel tanks up to 16,000 gal. Shriver 30" cast iron filter press, 35 plates, center feed, open delivery. Perry Equipment Corp., 1410 N. 6th St., Phila. 22, Pa.

#### Monsanto Offers New Resin

Polymer "C-3," a modified water-soluble vinyl acetate resin, was introduced recently by Monsanto Chemical Co., St. Louis, Mo. The new product is described as normally insoluble but becoming soluble on addition of a very small amount of alkali or ammonia. According to the manufacturer polymer "C-3" is a good thickening agent and emulsifier for synthetic polymer and copolymer dispersions. It may be used as a replacement, completely or partially, for polyvinyl alcohol in some applications, as an active surface tension depressant even in hard water. The ammonium salt upon drying in air is no longer water-soluble. The product is available in three viscosity grades. Laboratory samples and commercial quantities may be obtained from the product development department of the plastics division at Springfield,

#### Corcoran Offers Sponge Mop

Corcoran Manufacturing Co., Long Beach, Calif., recently announced "Prest-to-Dri" vacuumatic mop, featuring a cellulose sponge of six by seven inch size, which swells to 45 square inches when wet. The mop has a "built-in" wringer." It is made of non-rusting aluminum and chromeplated steel. The pivot handle is reversible. The complete mop is said to weigh only 25 ounces.

#### **Comments on Vaporizers**

Insecticide-vaporizers, whether for use with lindane or DDT, should not be employed in homes or sleeping quarters, according to an article entitled Vaporizing Devices for Insecticides in the July issue of Consumers' Research Bulletin. The Interdepartmental Committee on Pest Control and the National Pest Control Association agree that their use is permissible only in mess halls, cafeterias, or commercial establishments where the personnel will be exposed to the toxic vapor only during limited working hours, not 24 hours a day. Vaporization should be limited to one gram of insecticide per 15,000 cubic feet per 24 hours. Recommendations concerning location, pilot light, etc., are discussed. New Jersey State Department of Health disapproves use of insecticides in food establishments "unless all food and surfaces on which food is prepared or stored are adequately protected from the vapor, smoke, fog, or solids given off by insecticide dispensing devices. . . . Further, all food preparation surfaces, utensils, and equipment must be thoroughly washed and cleaned after exposure to such insecticides and before any food shall contact these surfaces." Warnings by the American Medical Association are also mentioned.

#### **Johnson Names Connolly**

Appointment of William N. Connolly to the newly created post of director of public relations has just been announced by S. C. Johnson & Son, Inc., Racine, Wis. Mr. Johnson previously for 22 years was in charge of advertising for the company, and is being replaced as advertising director by Stuart D. Watson, formerly assistant advertising manager of Standard Oil Co. of Indiana, Chicago. In his new post, Mr. Connolly, who is a past chairman of the board of the Association of National Advertisers, is responsible for the development and direction of the broad phases of the company's public relations program.

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# of preceding month

Your cooperation in furnishing copy instructions on time will help us meet our publication date.

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## Eale Ends

its new all-synthetic bar toilet "soap" in the Cincinnati area, P & G evidently is edging into the field where many have cast their eyes, but few their dough, over the past several years. "Zest" is a good-looking milled bar, exclusively perfumed, lathers well. If it stands up under the localized acid test of the dear old public,—which, confidentially, never has known a good bar of soap from a chunk of swiss cheese,—national distribution undoubtedly will come next. Only other product heretofore marketed of this nature is C-P-P's "Vel." Technically, the problem has been a tough one to solve,—if it is solved.

Stated a speaker recently at the Copenhagen meeting of the International Association of Seed Crushers: "The world fat shortage is now over." And that, gentle reader, rates as the understatement of the year. Not only is the "shortage" over, but so are oils and fats over,—all over everywhere. We wonder what the average renderer thought when he read this startling news, previously having believed no doubt that the shortage was still on.

Marilee Stepan, daughter of Al C. Stepan, Jr., Chicago synthetic detergent tycoon, is a speed swimmer of note. Marilee made the finals in the 100 metre frestyle in the Olympics at Helsinki and also swam on the women's relay team. Father Al is currently completing a two-month stay in Europe during which he took in the Olympic Games and watched Marilee do her stuff against the best women swimmers in the world.

Another Olympic Games fan is none other than R. E. Moore, prez of Moore Brothers, N. Y., the big soap dispenser man. He has not missed an Olympic meet in over 30 years. His particular field of interest is gymnastics for which section of the American Olympic Committee, he is chairman, as well as being one of the recognized world authorities on the subject. With all those Roosians in the gymnastic events, we wonder if he learned to speak the language while he was in Helsinki.

A third generation of Bairds continues to descend upon the disinfectant business. But, this time, it's a girl. The latest addition to the Baird tribe is Heather Ann Baird, born to Mr. and Mrs. Cameron Baird at the Orange (N. J.) Memorial Hospital last month. Cameron is a younger brother of Gordon Baird, prez. of Baird & McGuire, Inc., Holbrook, Mass. and represents the company in N. Y. and on the East Coast. Welcome to this world of trials and tribulations, Heather!

Most of our dishwashing detergents foam too much and the foam lasts too long. It takes too long to get the suds out of the sink. That roughly is the nature of a recent complaint. Well, maybe Mrs. McGuff is using too much detergent. If she isn't, she is probably one woman in a million. But, don't tell 'em, especially right now. Everybody needs the business. Maybe later when things get flush again, probably we should tip off the lady to read directions on the carton and use less. But, not now!

Members of the Chemists' Club. N. Y. who hope to have their usual midday dry martini at the much-discussed and oft-maligned bar in the Lounge between Aug. 18 and Sept. 1, must arrange to patronize some other saloon for the period noted. The joint is closed for vacations.

If you want business, go out and create it,—or quit complainin.' If any-body ever said this for posterity, we don't know who it was or why he said it. But the fact remains, it's awful true. The point was brought home strongly to us by a sales letter sent out by the C. B. Dolge Co. of Westport, Conn. in behalf of its weed killer. After reading about poison

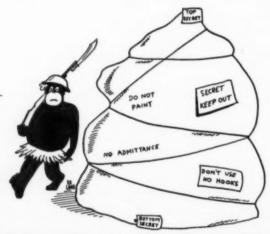
ivy, bindweed, and what happens to your factory if some dumb slob throws a lighted cigarette into the dry weeds when you're not around,—we could hardly wait to get after those weeds which menaced our place. Sales scare psychology? Sure, but it got action out of us. If they won't buy your stuff, scare hell out of 'em!

. .

Did you read in the papers how Charley Pressler, a perfumer for Colgate over in Jersey City goes home to lunch every day all the way over to Christopher St. in Greenwich Village, N. Y.? He does it principally in the interest of getting a home-made tomato and lettuce sandwich, and also so he can sniff perfume samples away from the high odor intensity of the plant in J.C. Now, Charles, we think that's one for the book which could set a precedent in the perfuming fraternity!

Three convicts tried to escape from the Oklahoma State Pen at McAlester, Okla. by hiding in barrels of soft soap made at the penitentiary to be shipped outside. After two hours of practical suffocation, a guard discovered one of the men peering at him from a bunghole and raised the alarm. All of which goes to illustrate the risks involved in making soap at prisons for shipment to other institutions in the state.

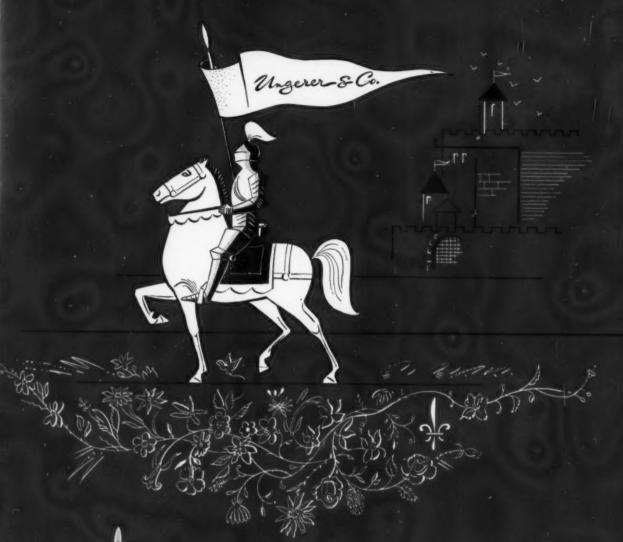
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# Announcement

### **Availability**

# **ALLETHRIN**from U.S.I.

U.S.I.'s full scale plant for the production of Allethrin is practically complete and will be ready for operation in a few weeks. Orders are now being accepted for October delivery.

The availability of ample quantities of Allethrin at more economical price levels than have heretofore prevailed represents a profound alteration in the insecticidal supply picture and makes it necessary for all manufacturers of insecticide products in which Allethrin is a potential factor to re-examine their formulations — with consideration of both the new price structure and the most recent and authentic entomological information.

Three and a half years of intensive study on the entomological effect of Allethrin alone and in combinations with other materials have served to not only remove some of the initial illusions but have established the fact that if used properly and at economical costs, Allethrin is an extremely valuable supplement for pyrethrins. It also has been established that it is not a substitute for pyrethrins except in a narrow and carefully defined sense and that generalizations as to the relative effectiveness are impossible.

Allethrin can and will be used on a large scale in a great number of insecticides for the 1952-53 season. All such formulations will require special study and ample information will be available over the next few months from the U. S. I. laboratories and other equally authentic sources on which to base such decisions.

#### At the moment, space and time will permit only a few statements of general, if not universal, applicability:

- Allethrin is not a synergised pyrethrum it is an extremely useful chemical possessing some, but by no means all, of the virtues of natural pyrethrum.
- 2. Practically all claims and statements which have been made up to now regarding the proper use of Allethrin should be re-examined in the light of the latest available information.
- 3. Allethrin shows far less synergistic effect than pyrethrins.

None of the currently available synergists increase the effectiveness of Allethrin to anything like the same extent that the best synergists, like piperonyl butoxide, increase the effectiveness of pyrethrins. As a result, more Allethrin must be used to accomplish the same results.

Among of the current claims of the effectiveness of present synergists on Allethrin have been demonstrated to have no foundation in fact.

Aerosols unquestionably represent the most promising field for Allethrin and its availability at reasonable cost provides the ideal opportunity for industry to step up the effectiveness of its insecticides without compromising with the competitive pressures toward less effective or less acceptable formulations.

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